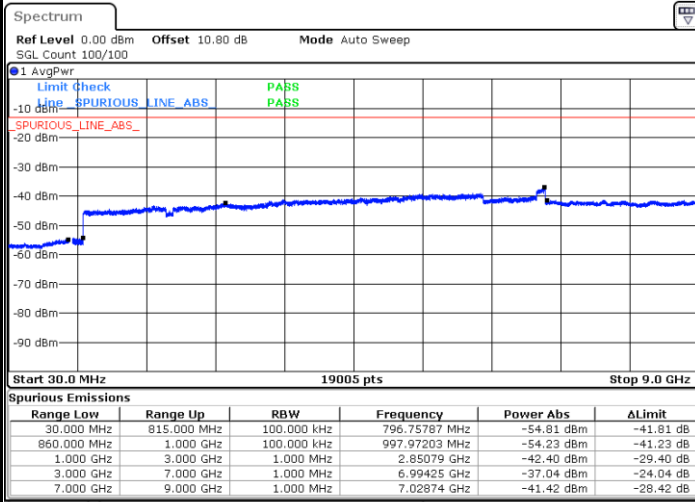




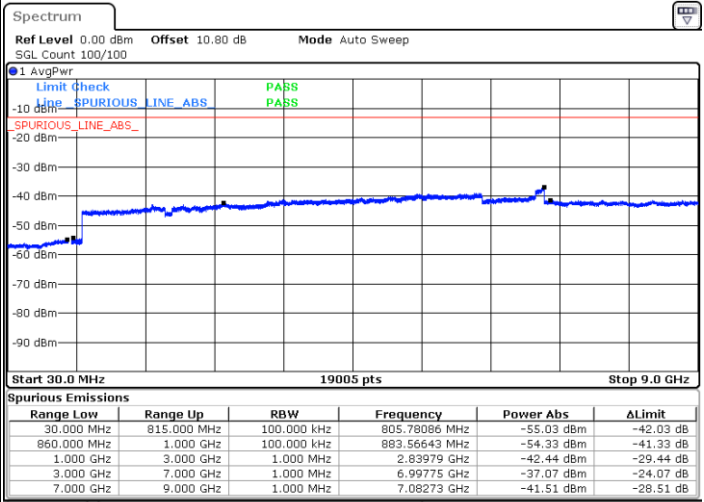
LTE Band 5 / 5MHz

Highest Channel / QPSK



Date: 14.JAN.2020 16:00:06

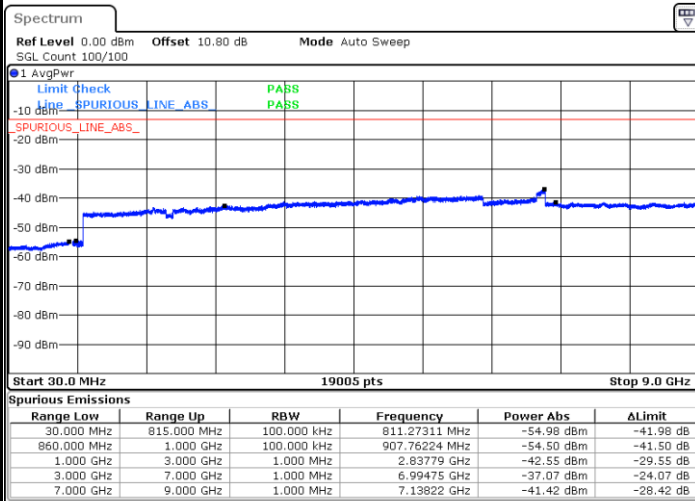
Highest Channel / 16QAM



Date: 14.JAN.2020 16:00:59

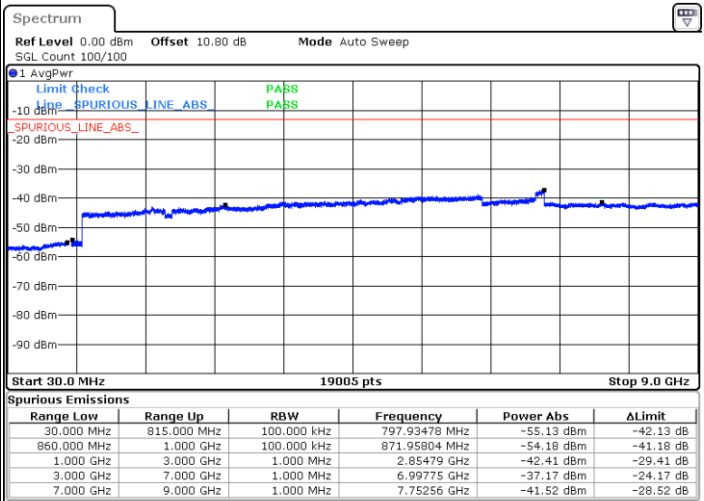
LTE Band 5 / 10MHz

Lowest Channel / QPSK



Date: 14.JAN.2020 16:19:26

Lowest Channel / 16QAM



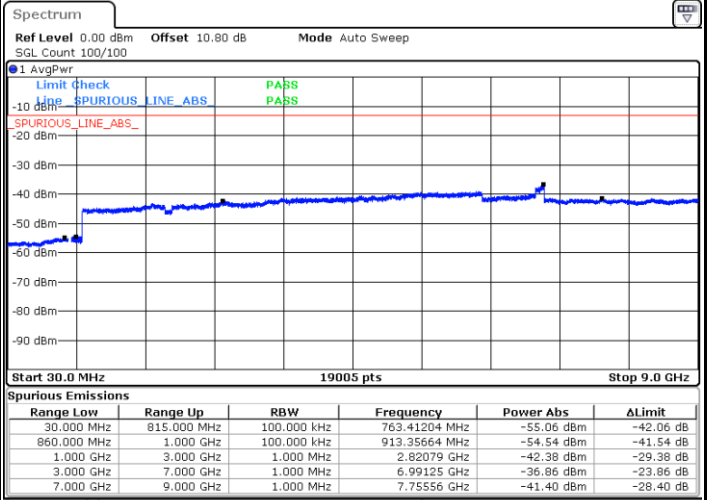
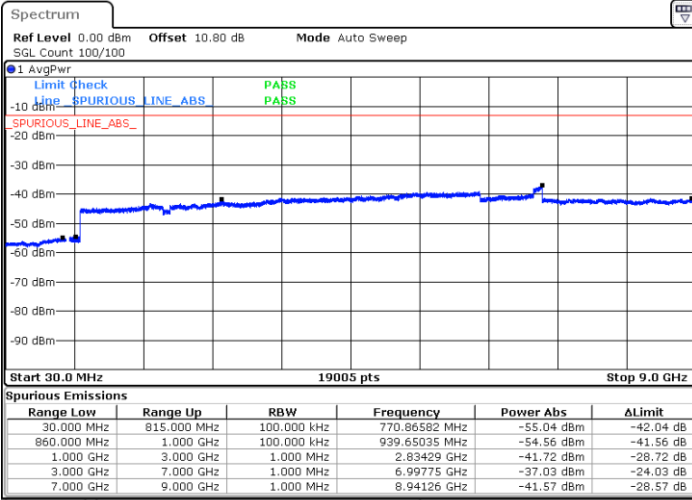
Date: 14.JAN.2020 16:20:20



LTE Band 5 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

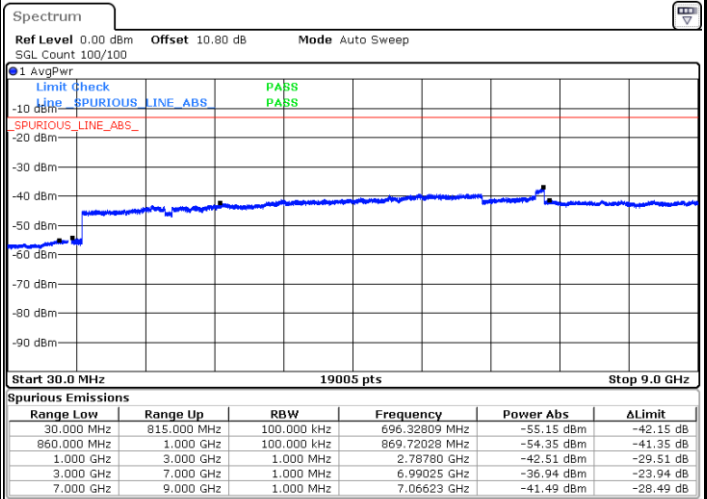
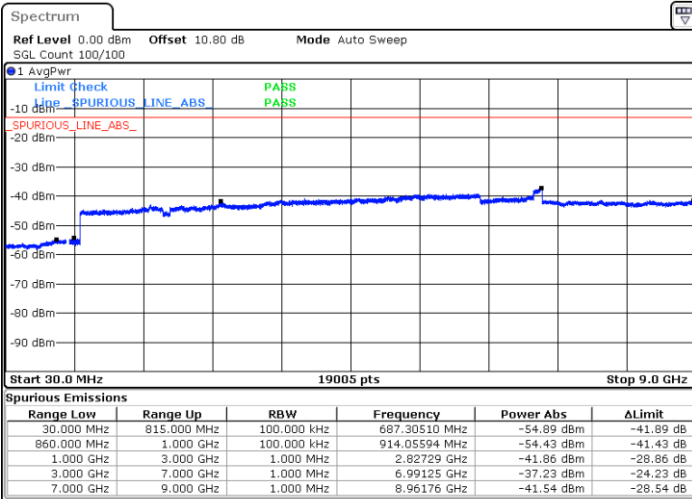


Date: 14.JAN.2020 16:22:07

Date: 14.JAN.2020 16:23:01

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 14.JAN.2020 16:31:34

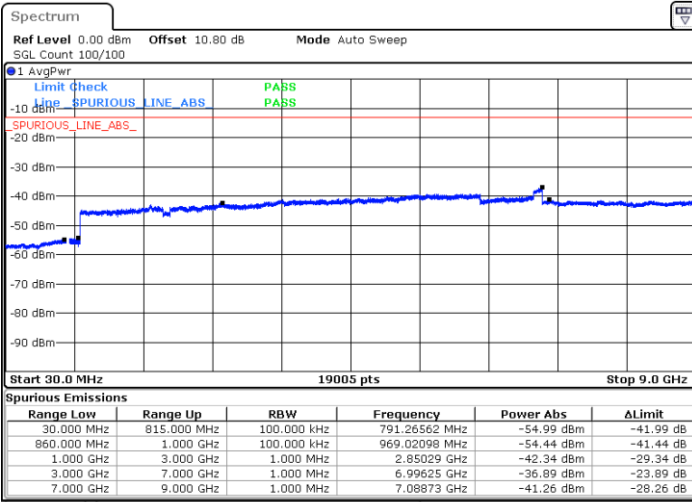
Date: 14.JAN.2020 16:32:27



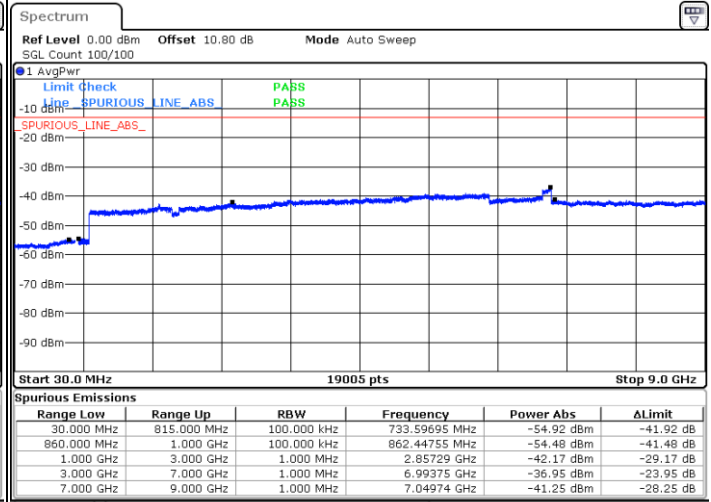
LTE Band 5 / 1.4MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

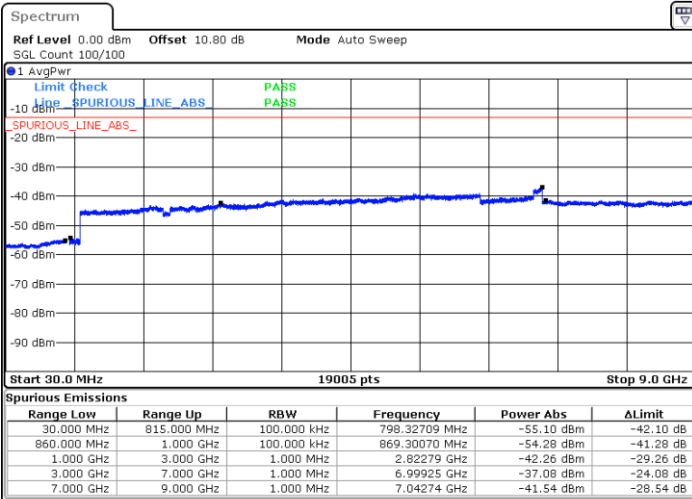


Date: 14.JAN.2020 15:01:05



Date: 14.JAN.2020 15:02:25

Highest Channel / 64QAM



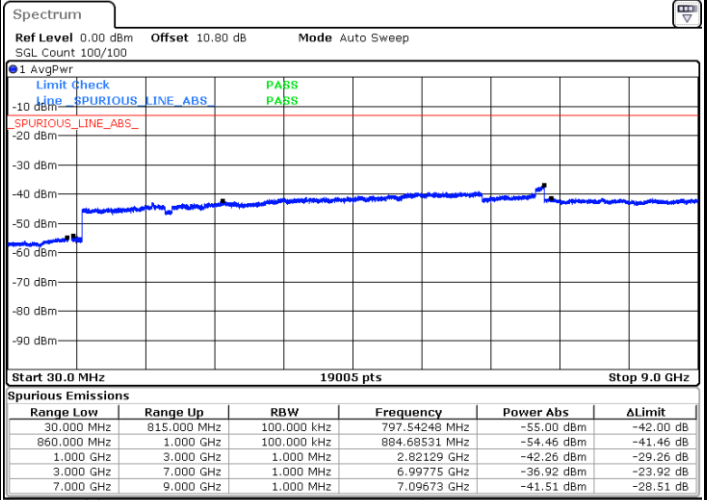
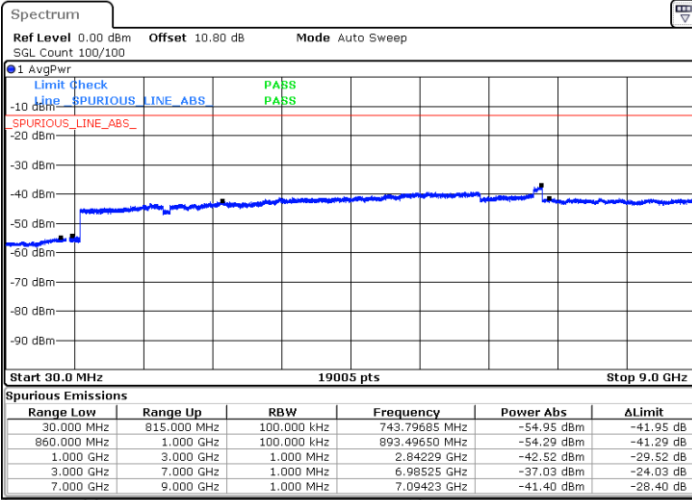
Date: 14.JAN.2020 15:07:07



LTE Band 5 / 3MHz

Lowest Channel / 64QAM

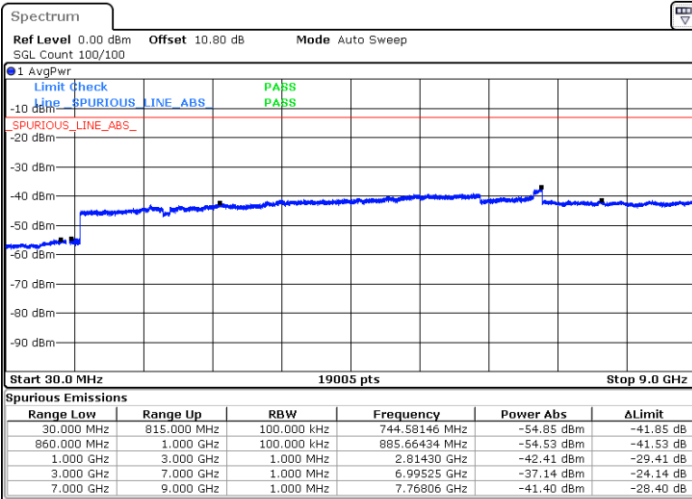
Middle Channel / 64QAM



Date: 14.JAN.2020 15:33:23

Date: 14.JAN.2020 15:34:43

Highest Channel / 64QAM



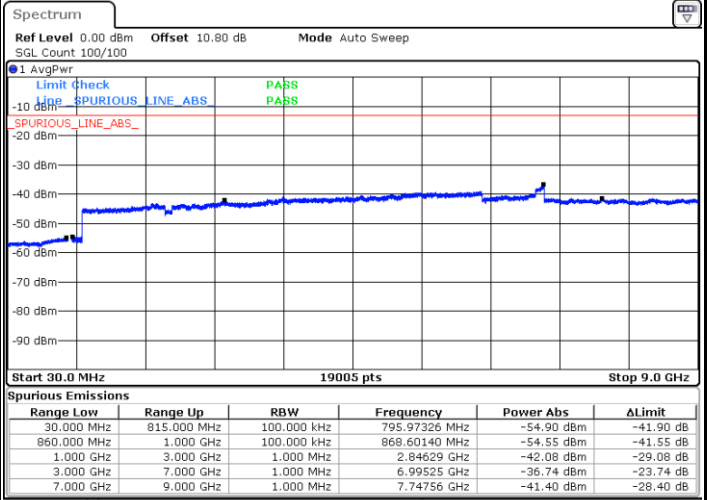
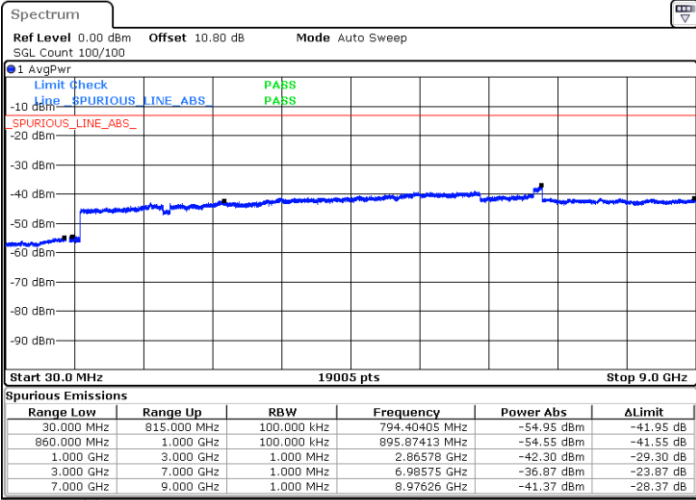
Date: 14.JAN.2020 15:39:27



LTE Band 5 / 5MHz

Lowest Channel / 64QAM

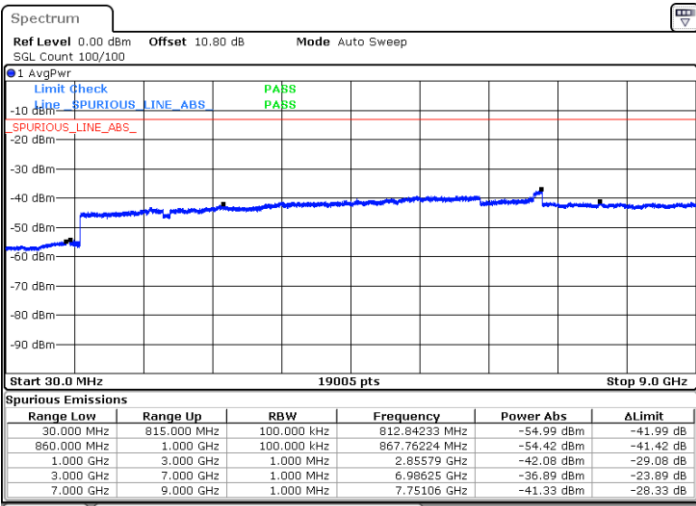
Middle Channel / 64QAM



Date: 14.JAN.2020 16:05:42

Date: 14.JAN.2020 16:07:02

Highest Channel / 64QAM



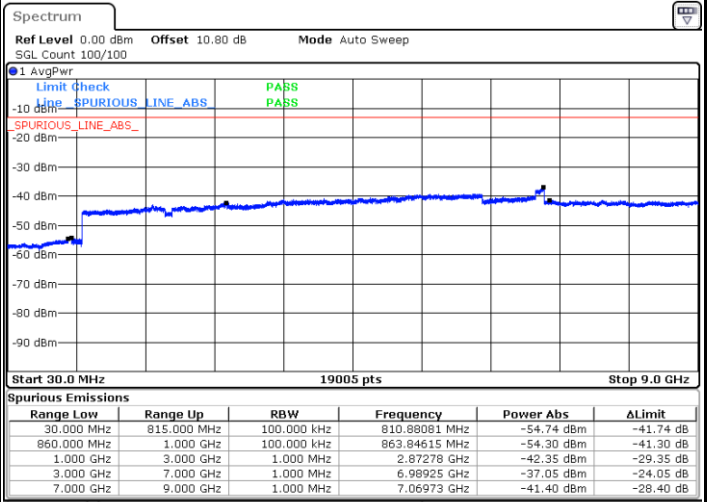
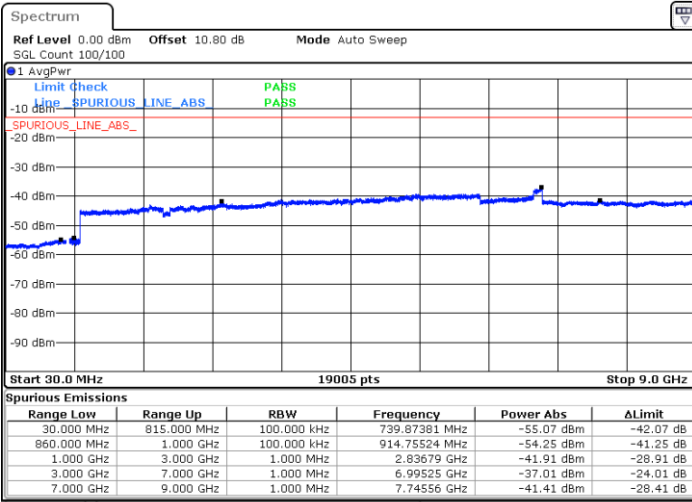
Date: 14.JAN.2020 16:33:21



LTE Band 5 / 10MHz

Lowest Channel / 64QAM

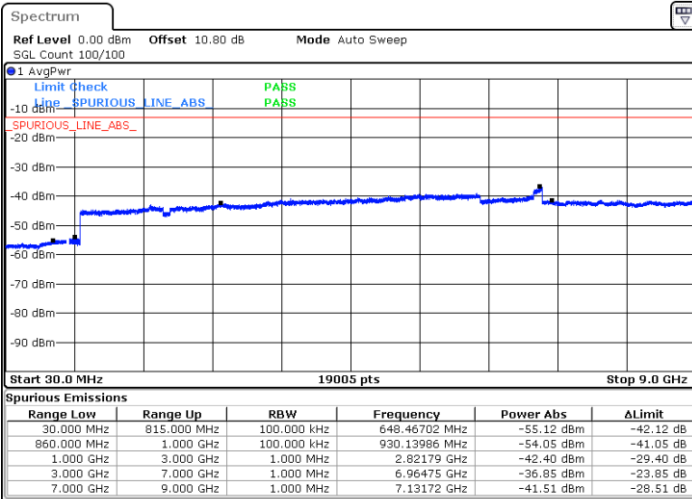
Middle Channel / 64QAM



Date: 14.JAN.2020 16:38:04

Date: 14.JAN.2020 16:39:24

Highest Channel / 64QAM



Date: 14.JAN.2020 17:15:30



**Frequency Stability**

Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0032	PASS
40	Normal Voltage	0.0074	
30	Normal Voltage	0.0018	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0122	
0	Normal Voltage	0.0008	
-10	Normal Voltage	0.0008	
-20	Normal Voltage	0.0018	
-30	Normal Voltage	0.0087	
20	Maximum Voltage	0.0008	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0012	

**Note:**

1. Normal Voltage =3.9 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.35 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 7

## Peak-to-Average Ratio

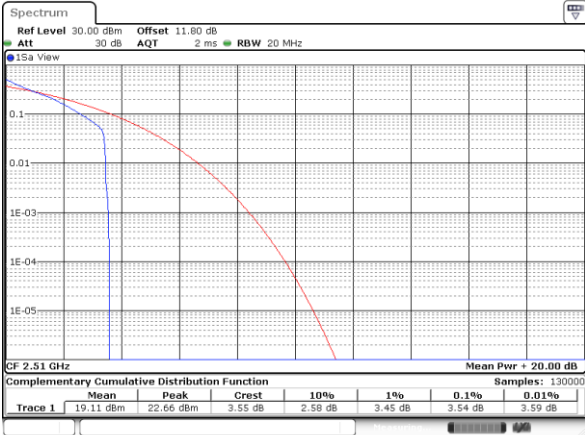
Mode	LTE Band 7 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.54	4.81	5.36	5.80	PASS
Middle CH	3.51	4.99	5.42	5.91	
Highest CH	3.68	4.81	5.04	5.77	
Mode	LTE Band 7 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.52	6.29	-	-	PASS
Middle CH	6.52	6.43	-	-	
Highest CH	6.84	6.46	-	-	





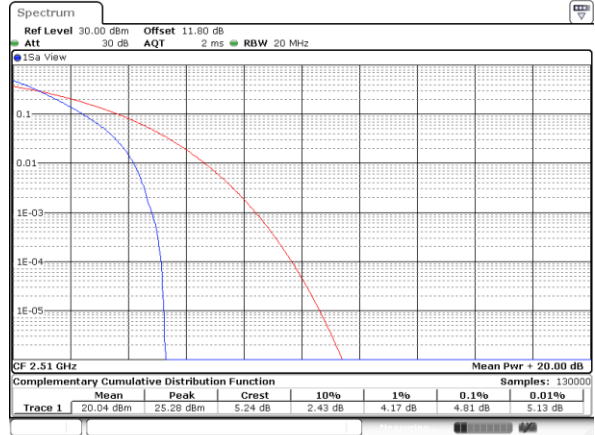
LTE Band 7 / 20MHz / QPSK

Lowest Channel / 1RB



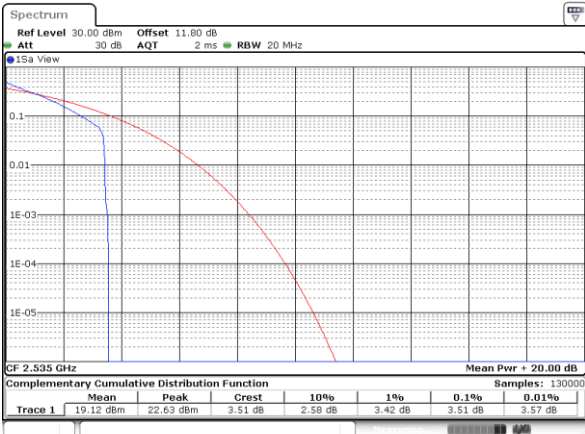
Date: 16, JAN, 2020 19:17:00

Lowest Channel / Full RB



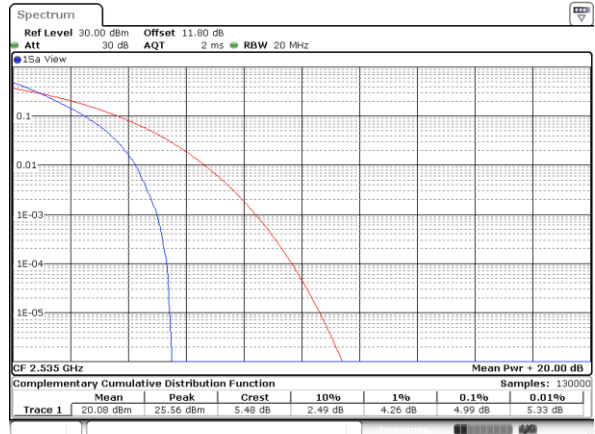
Date: 16, JAN, 2020 19:17:13

Middle Channel / 1RB



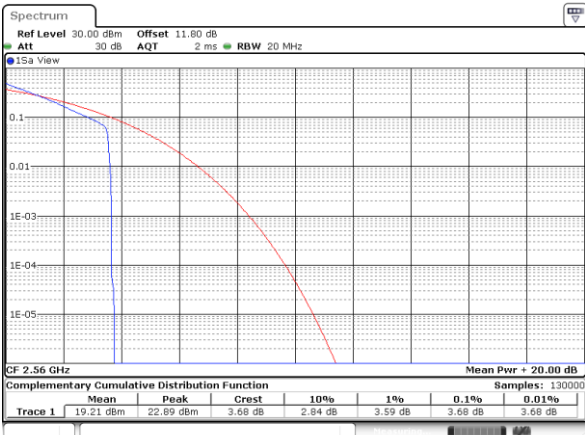
Date: 16, JAN, 2020 19:17:27

Middle Channel / Full RB



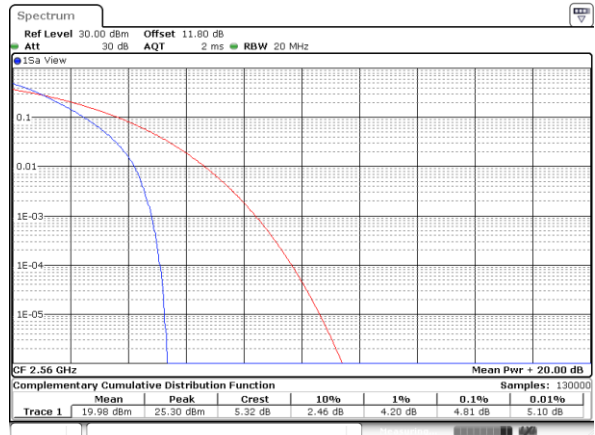
Date: 16, JAN, 2020 19:17:39

Highest Channel / 1RB



Date: 16, JAN, 2020 19:17:53

Highest Channel / Full RB

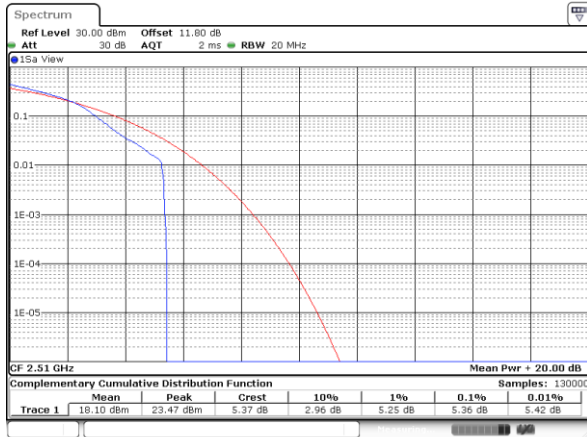


Date: 16, JAN, 2020 19:18:06



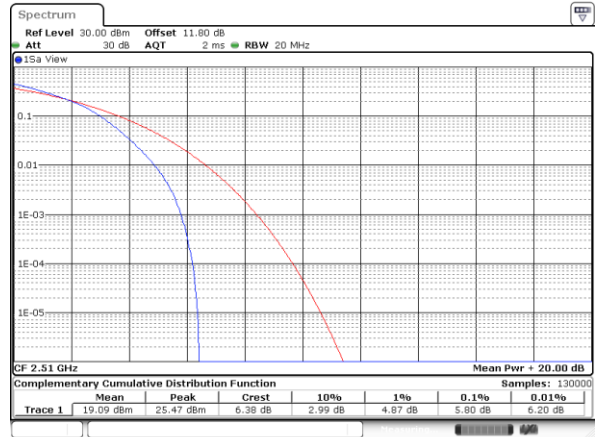
LTE Band 7 / 20MHz / 16QAM

Lowest Channel / 1RB



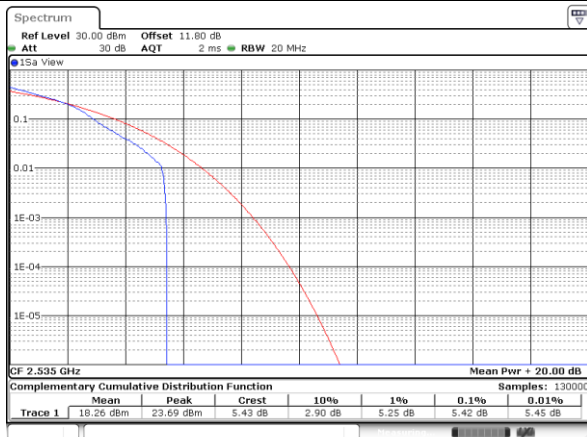
Date: 16, JAN, 2020 19:15:39

Lowest Channel / Full RB



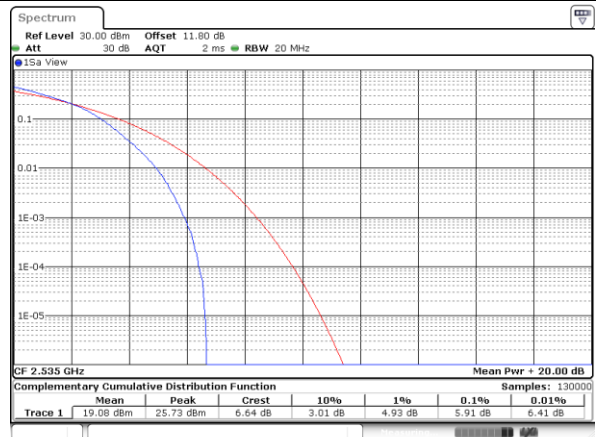
Date: 16, JAN, 2020 19:15:53

Middle Channel / 1RB



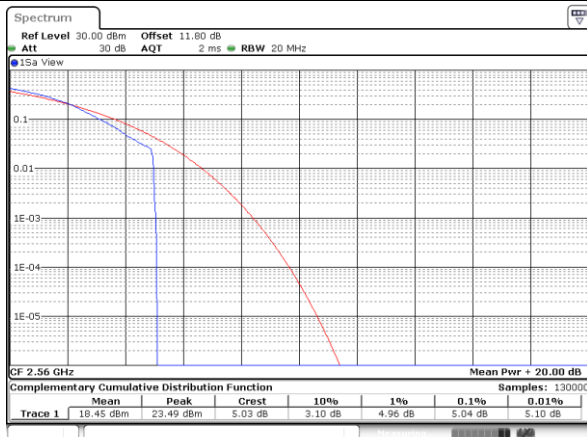
Date: 16, JAN, 2020 19:16:06

Middle Channel / Full RB



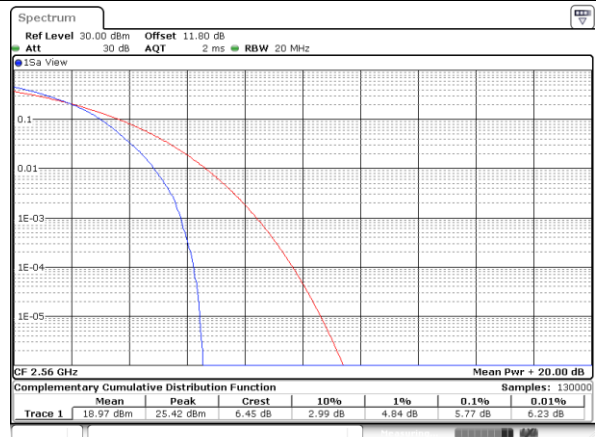
Date: 16, JAN, 2020 19:16:19

Highest Channel / 1RB



Date: 16, JAN, 2020 19:16:33

Highest Channel / Full RB

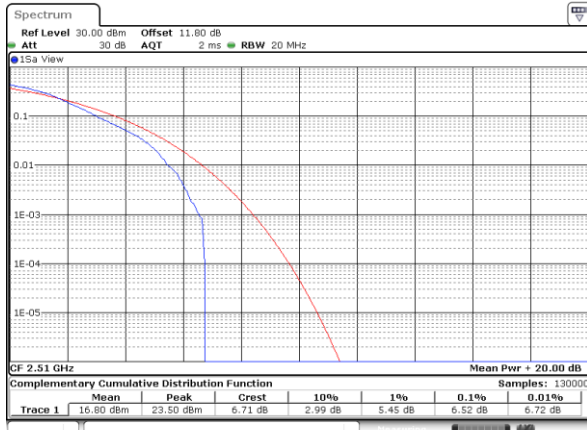


Date: 16, JAN, 2020 19:16:47



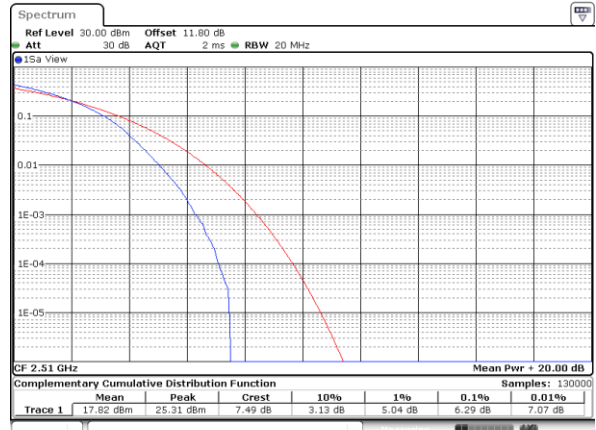
LTE Band 7 / 20MHz / 64QAM

Lowest Channel / 1RB



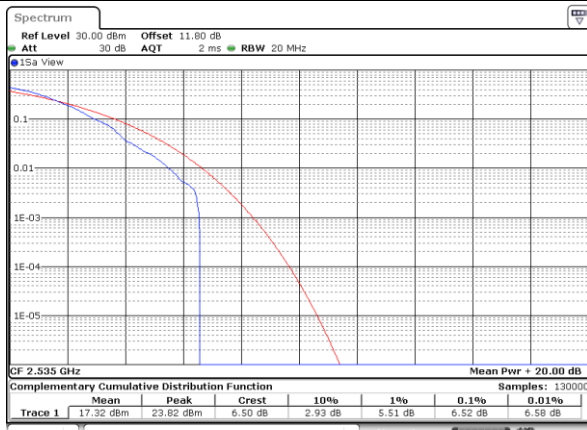
Date: 16, JAN, 2020 19:18:19

Lowest Channel / Full RB



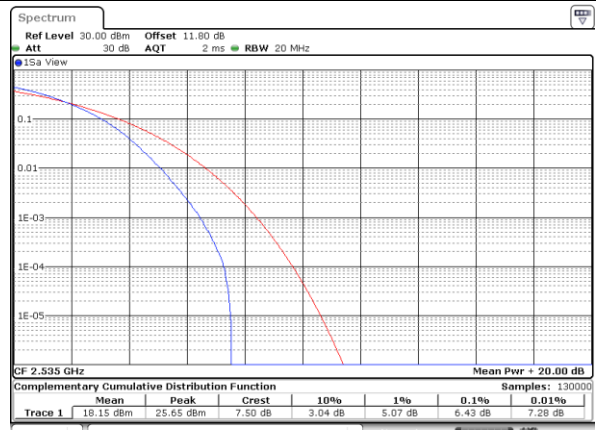
Date: 16, JAN, 2020 19:18:33

Middle Channel / 1RB



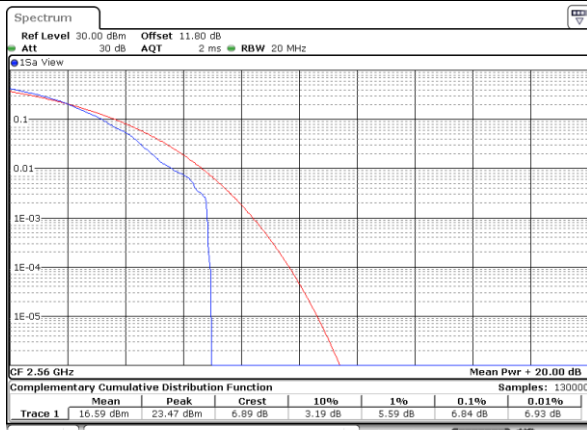
Date: 16, JAN, 2020 19:18:46

Middle Channel / Full RB



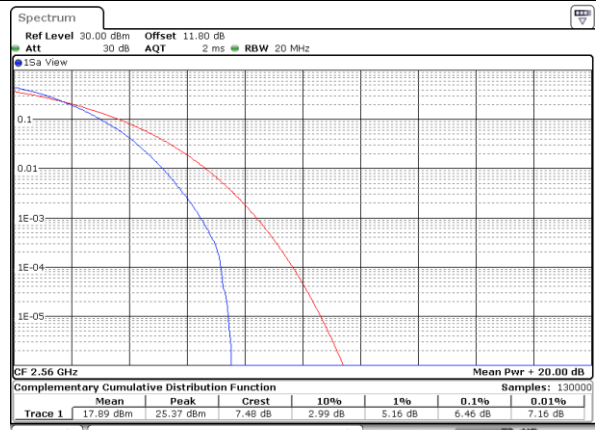
Date: 16, JAN, 2020 19:18:59

Highest Channel / 1RB



Date: 16, JAN, 2020 19:19:12

Highest Channel / Full RB



Date: 16, JAN, 2020 19:19:25



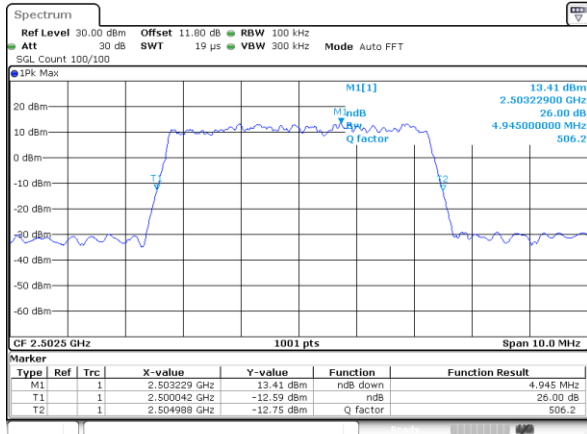
**26dB Bandwidth**

Mode BW	LTE Band 7 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.95	4.95	9.73	9.75	14.42	14.39	18.94	18.98
Middle CH	-	-	-	-	4.87	4.96	9.67	9.71	14.33	14.57	19.10	18.82
Highest CH	-	-	-	-	4.88	4.89	9.83	9.73	14.24	14.30	19.14	19.22
Mode	LTE Band 7 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.93	-	9.97	-	14.39	-	19.18	-
Middle CH	-	-	-	-	4.86	-	9.71	-	14.39	-	18.82	-
Highest CH	-	-	-	-	4.88	-	9.77	-	14.54	-	19.18	-



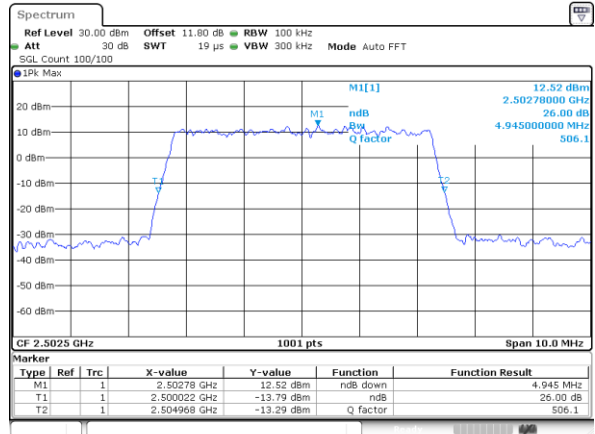
LTE Band 7

Lowest Channel / 5MHz / QPSK



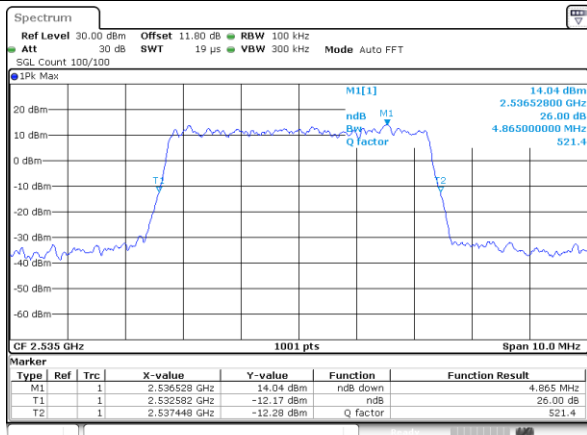
Date: 14\_JAN\_2020 17:35:28

Lowest Channel / 5MHz / 16QAM



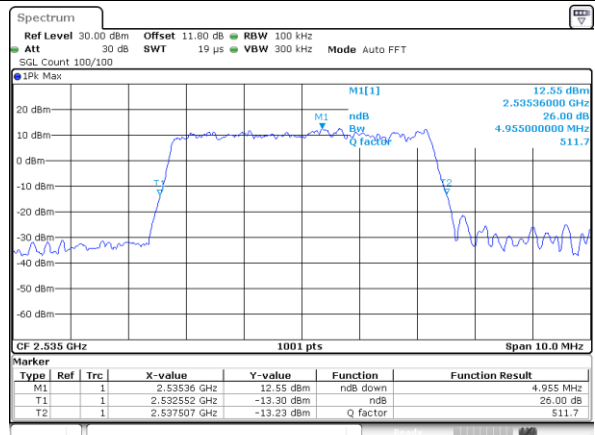
Date: 14\_JAN\_2020 17:35:42

Middle Channel / 5MHz / QPSK



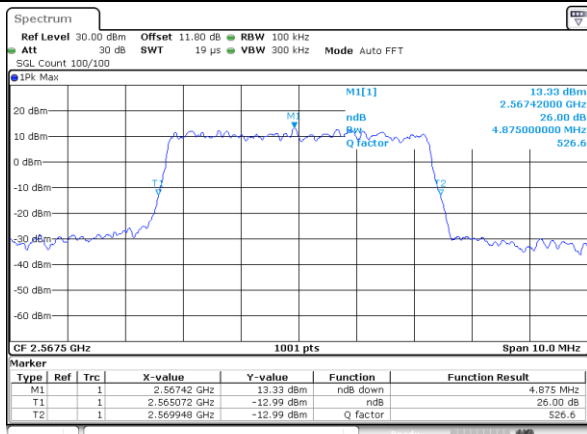
Date: 14\_JAN\_2020 17:42:15

Middle Channel / 5MHz / 16QAM



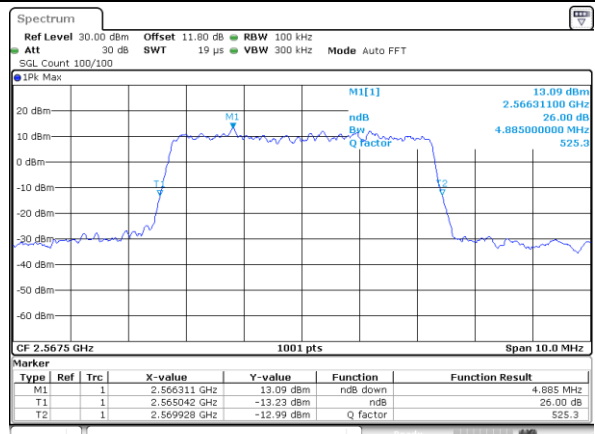
Date: 14\_JAN\_2020 17:42:29

Highest Channel / 5MHz / QPSK



Date: 14\_JAN\_2020 17:44:54

Highest Channel / 5MHz / 16QAM

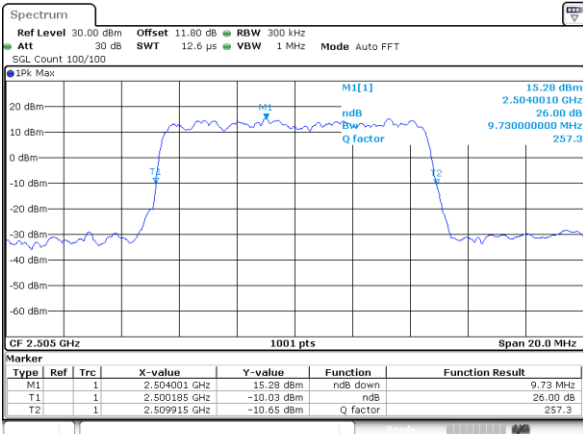


Date: 14\_JAN\_2020 17:45:07



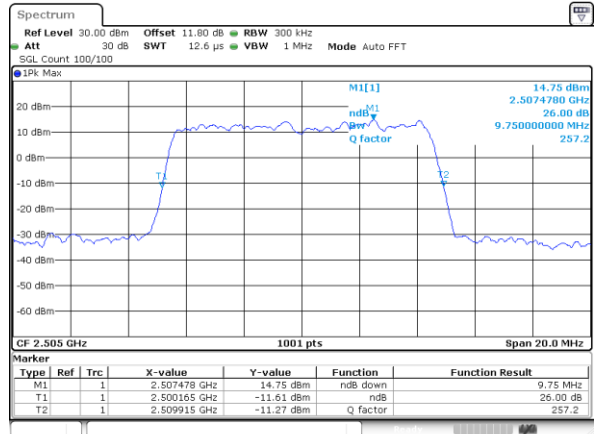
LTE Band 7

Lowest Channel / 10MHz / QPSK



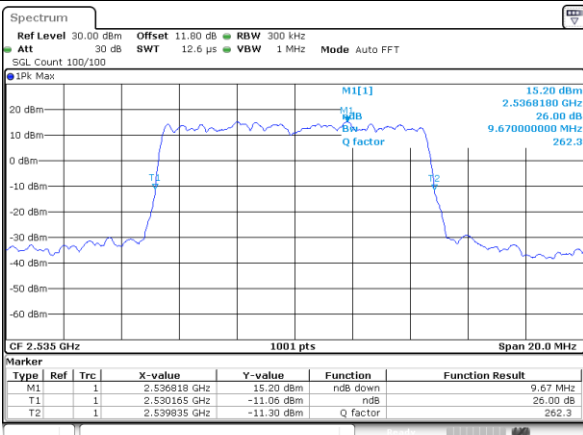
Date: 14\_JAN.2020 17:59:45

Lowest Channel / 10MHz / 16QAM



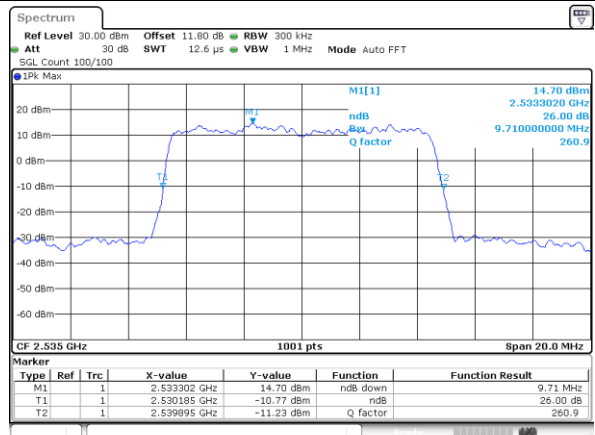
Date: 14\_JAN.2020 17:59:59

Middle Channel / 10MHz / QPSK



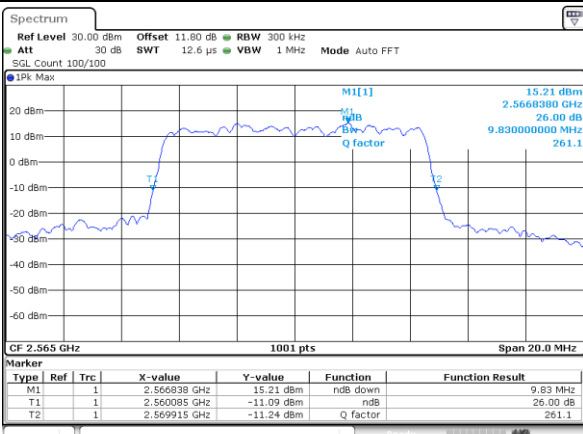
Date: 14\_JAN.2020 18:06:30

Middle Channel / 10MHz / 16QAM



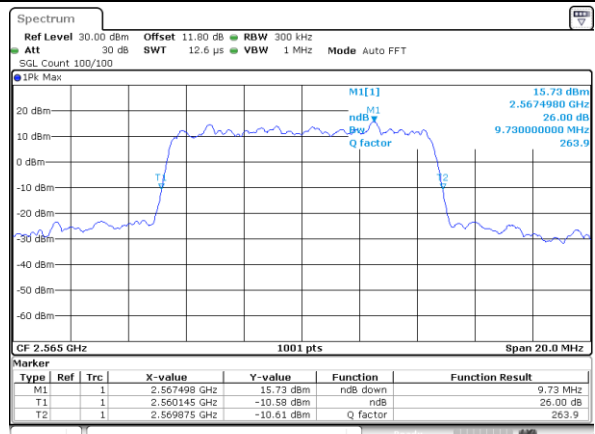
Date: 14\_JAN.2020 18:06:43

Highest Channel / 10MHz / QPSK



Date: 14\_JAN.2020 18:09:08

Highest Channel / 10MHz / 16QAM

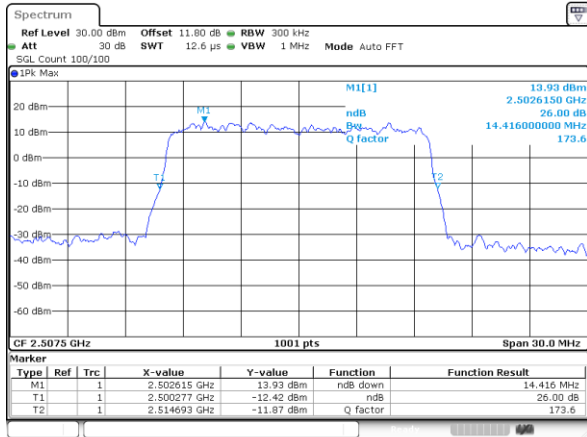


Date: 14\_JAN.2020 18:09:22



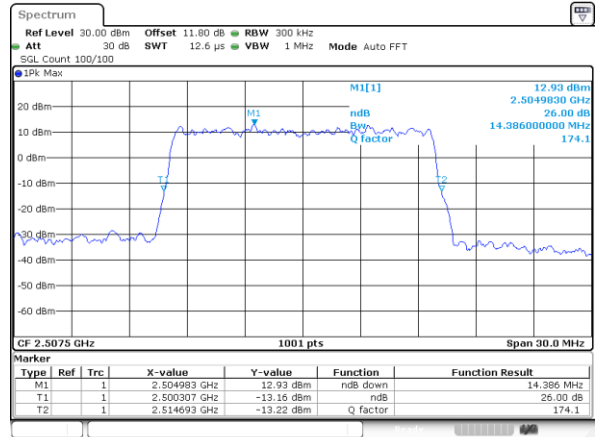
LTE Band 7

Lowest Channel / 15MHz / QPSK



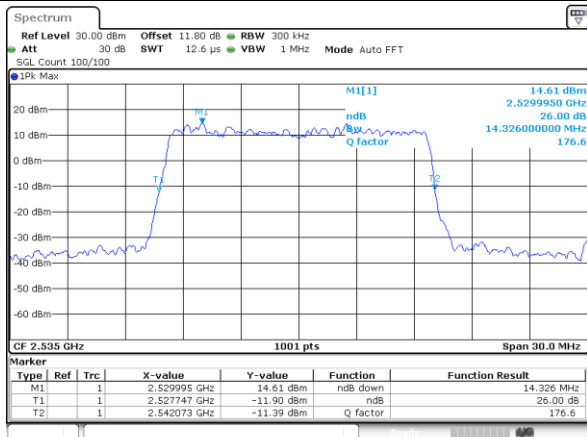
Date: 14\_JAN\_2020 18:42:46

Lowest Channel / 15MHz / 16QAM



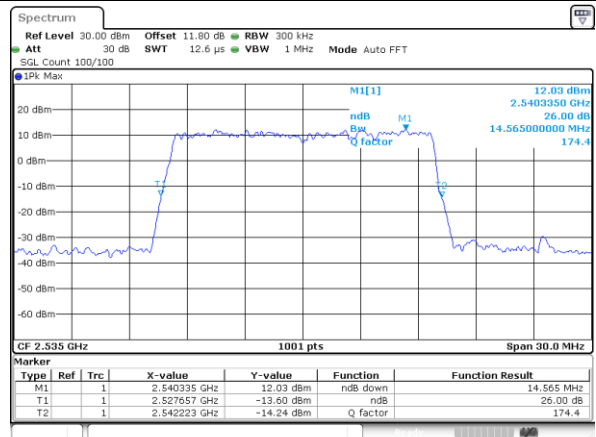
Date: 14\_JAN\_2020 18:43:00

Middle Channel / 15MHz / QPSK



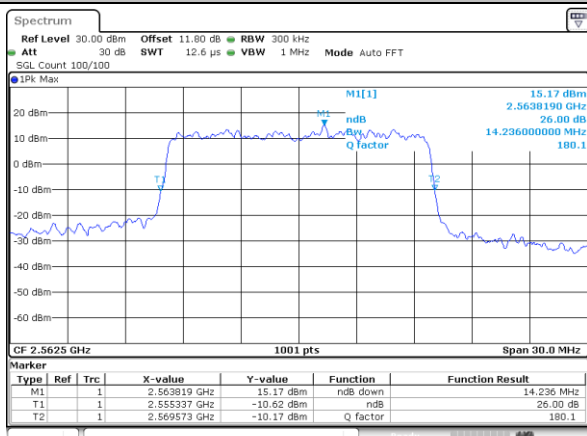
Date: 14\_JAN\_2020 18:49:33

Middle Channel / 15MHz / 16QAM



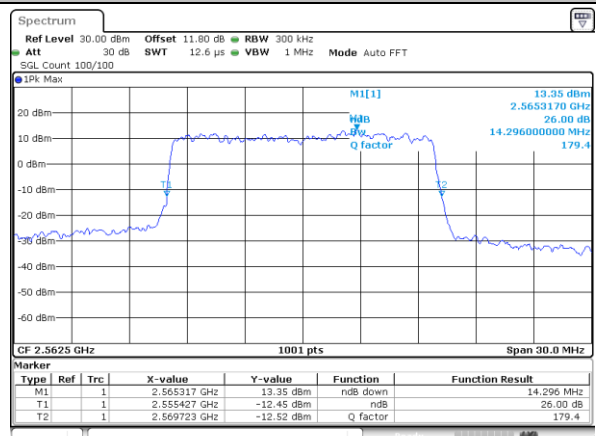
Date: 14\_JAN\_2020 18:49:46

Highest Channel / 15MHz / QPSK



Date: 14\_JAN\_2020 18:52:11

Highest Channel / 15MHz / 16QAM

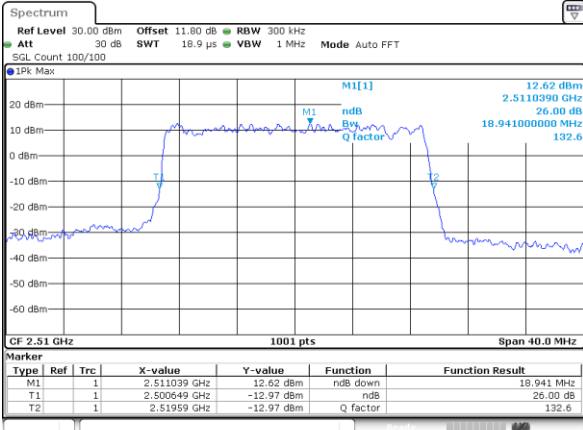


Date: 14\_JAN\_2020 18:52:25



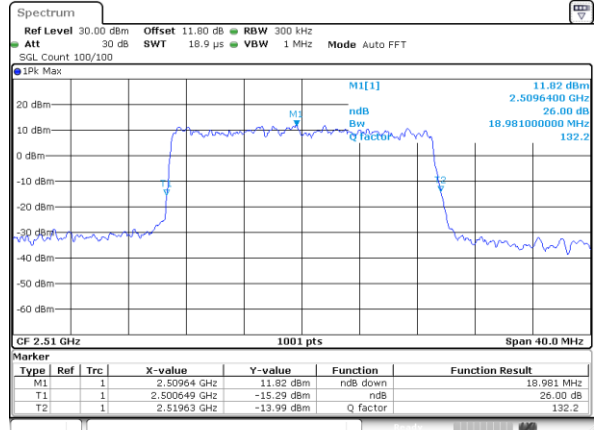
LTE Band 7

Lowest Channel / 20MHz / QPSK



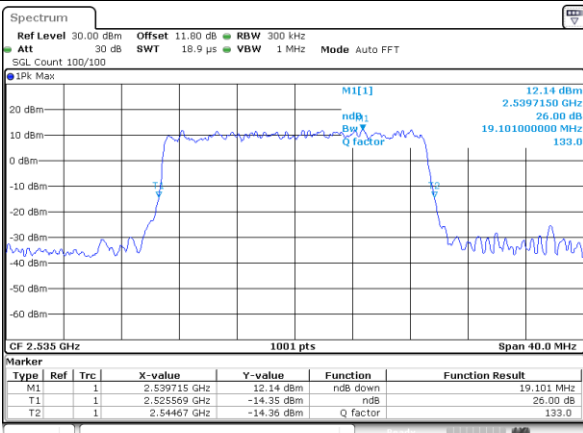
Date: 14\_JAN\_2020 19:19:47

Lowest Channel / 20MHz / 16QAM



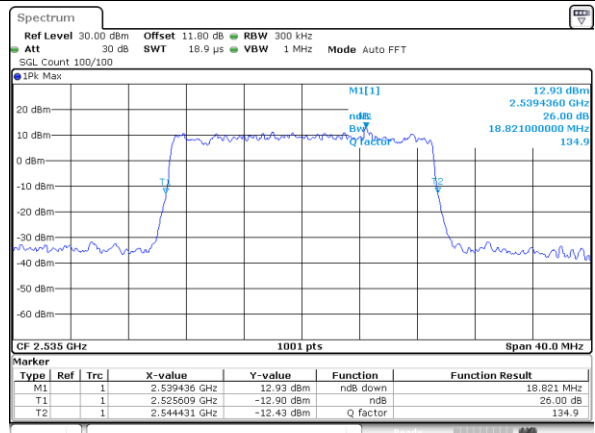
Date: 14\_JAN\_2020 19:20:01

Middle Channel / 20MHz / QPSK



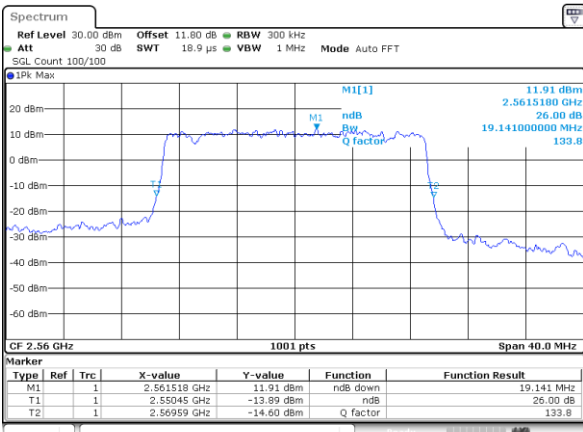
Date: 14\_JAN\_2020 19:26:33

Middle Channel / 20MHz / 16QAM



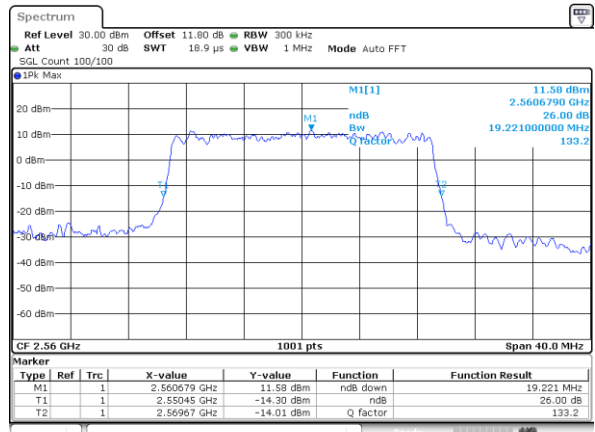
Date: 14\_JAN\_2020 19:26:46

Highest Channel / 20MHz / QPSK



Date: 14\_JAN\_2020 19:29:11

Highest Channel / 20MHz / 16QAM



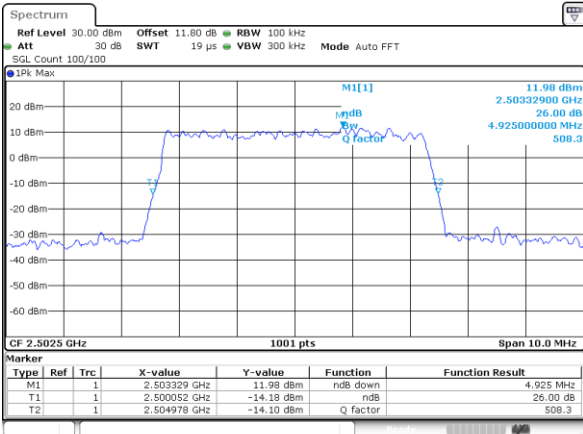
Date: 14\_JAN\_2020 19:29:25





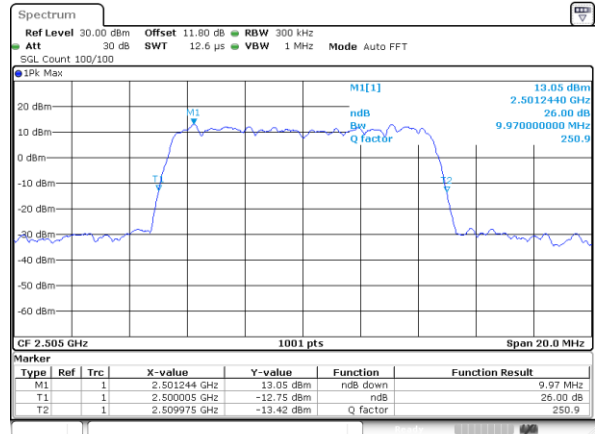
LTE Band 7

Lowest Channel / 5MHz / 64QAM



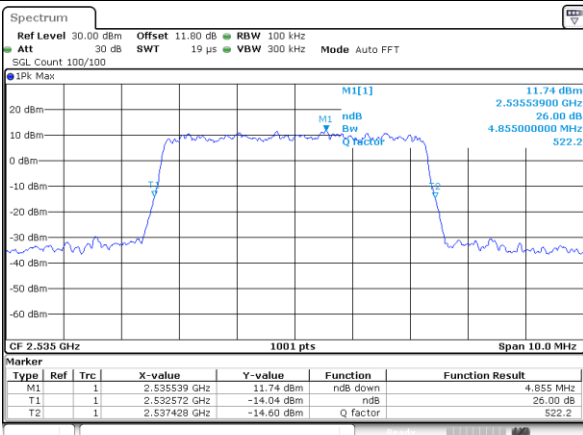
Date: 14\_JAN.2020 17:51:26

Lowest Channel / 10MHz / 64QAM



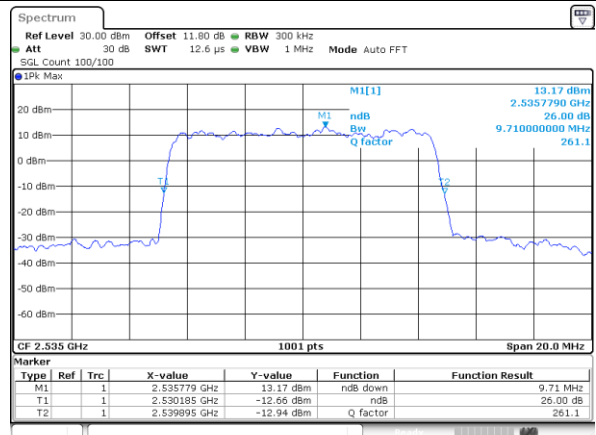
Date: 14\_JAN.2020 18:15:41

Middle Channel / 5MHz / 64QAM



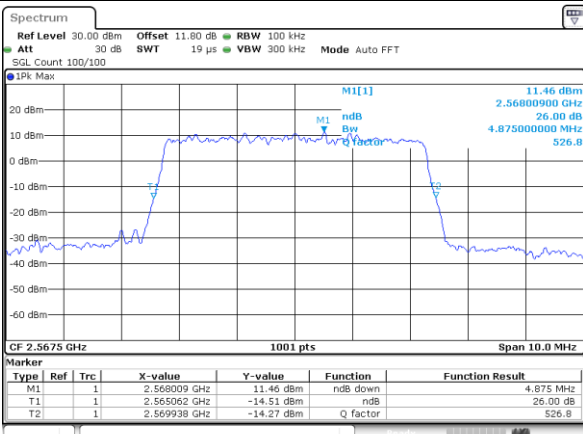
Date: 14\_JAN.2020 17:54:49

Middle Channel / 10MHz / 64QAM



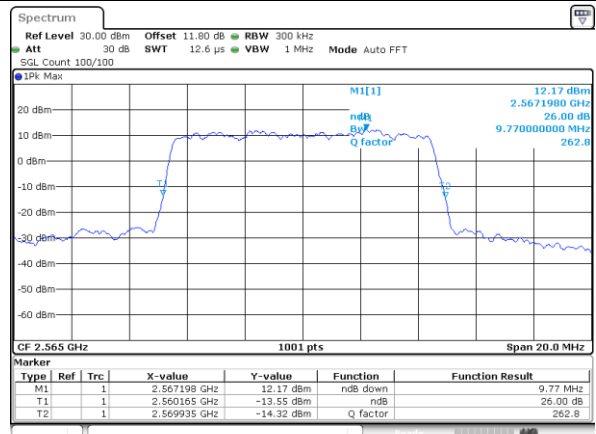
Date: 14\_JAN.2020 18:37:49

Highest Channel / 5MHz / 64QAM



Date: 14\_JAN.2020 17:56:08

Highest Channel / 10MHz / 64QAM

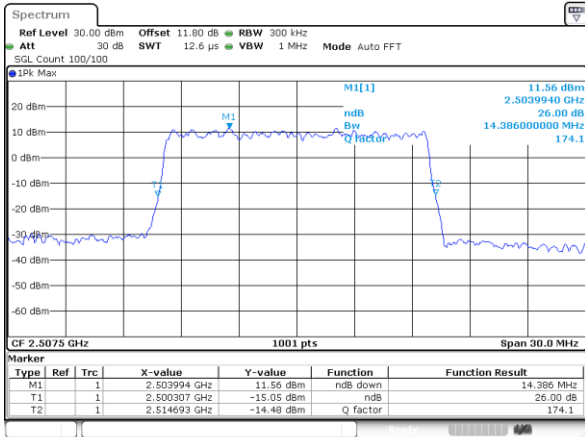


Date: 14\_JAN.2020 18:39:08



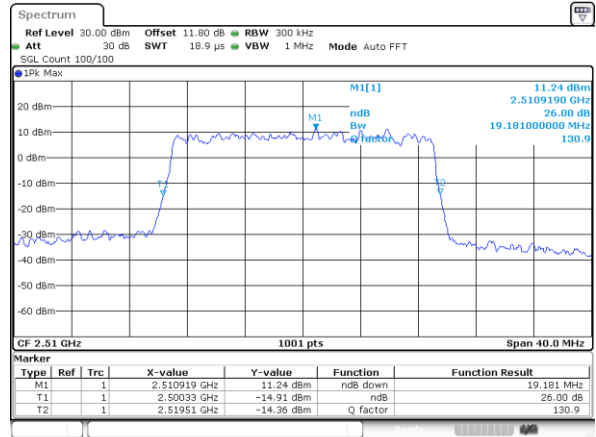
LTE Band 7

Lowest Channel / 15MHz / 64QAM



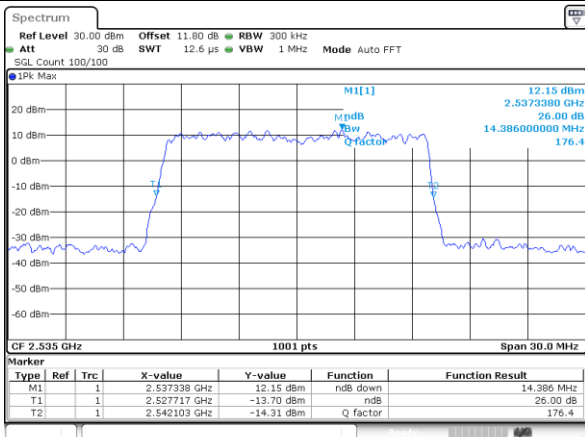
Date: 14\_JAN.2020 18:58:44

Lowest Channel / 20MHz / 64QAM



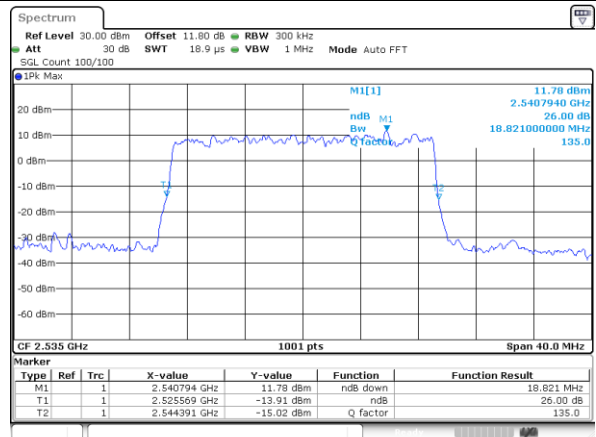
Date: 14\_JAN.2020 19:46:04

Middle Channel / 15MHz / 64QAM



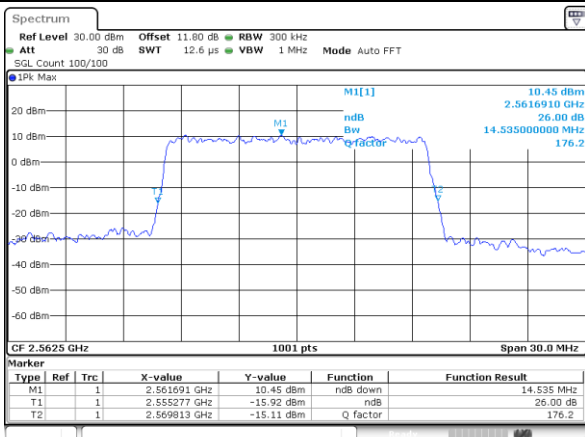
Date: 14\_JAN.2020 19:02:06

Middle Channel / 20MHz / 64QAM



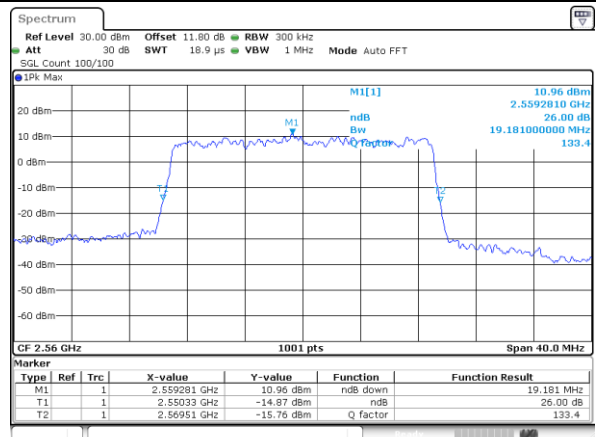
Date: 14\_JAN.2020 19:49:47

Highest Channel / 15MHz / 64QAM



Date: 14\_JAN.2020 19:16:08

Highest Channel / 20MHz / 64QAM



Date: 14\_JAN.2020 19:51:06



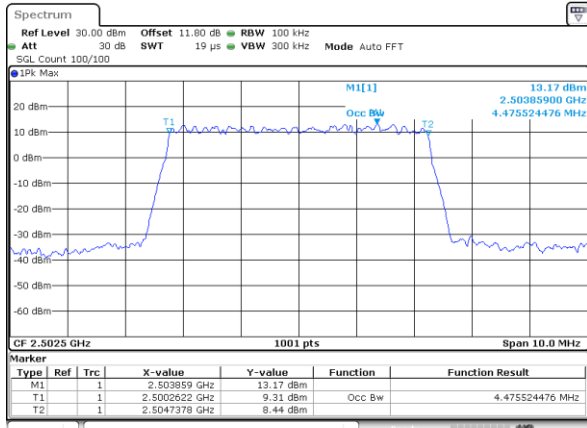
**Occupied Bandwidth**

Mode BW	LTE Band 7 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.48	4.49	9.11	9.07	13.40	13.46	17.82	17.86
Middle CH	-	-	-	-	4.50	4.47	9.03	8.97	13.46	13.37	17.94	17.82
Highest CH	-	-	-	-	4.48	4.49	9.05	8.91	13.43	13.43	17.86	17.86
Mode	LTE Band 7 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.53	-	8.97	-	13.37	-	17.94	-
Middle CH	-	-	-	-	4.50	-	8.99	-	13.43	-	17.82	-
Highest CH	-	-	-	-	4.48	-	9.01	-	13.37	-	17.86	-



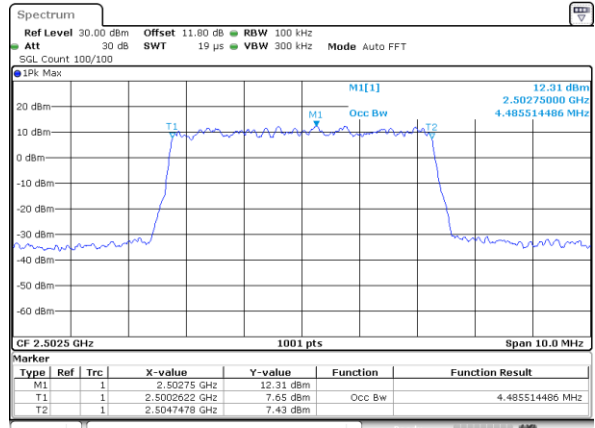
LTE Band 7

Lowest Channel / 5MHz / QPSK



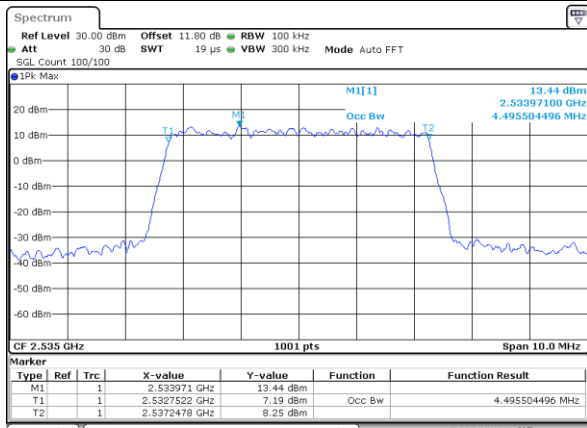
Date: 14.JAN.2020 17:35:00

Lowest Channel / 5MHz / 16QAM



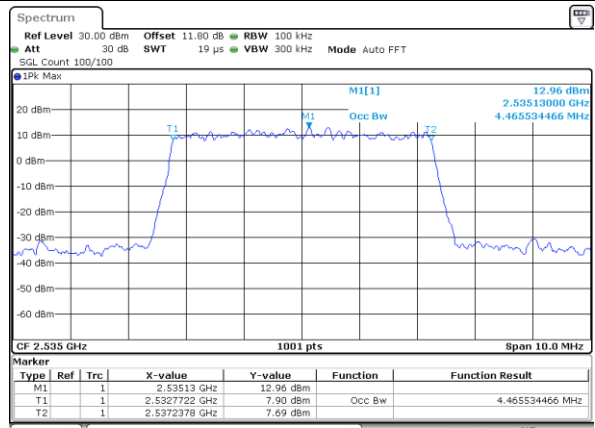
Date: 14.JAN.2020 17:35:14

Middle Channel / 5MHz / QPSK



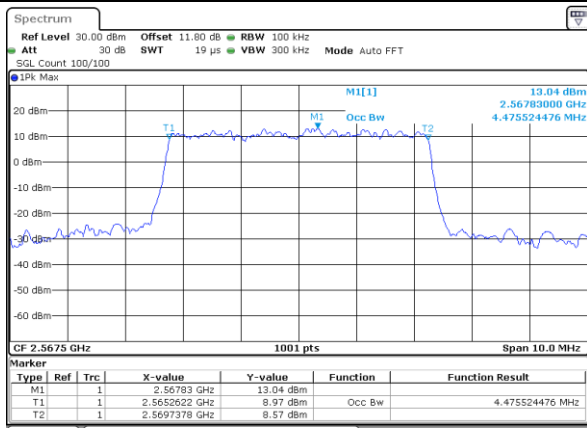
Date: 14.JAN.2020 17:41:49

Middle Channel / 5MHz / 16QAM



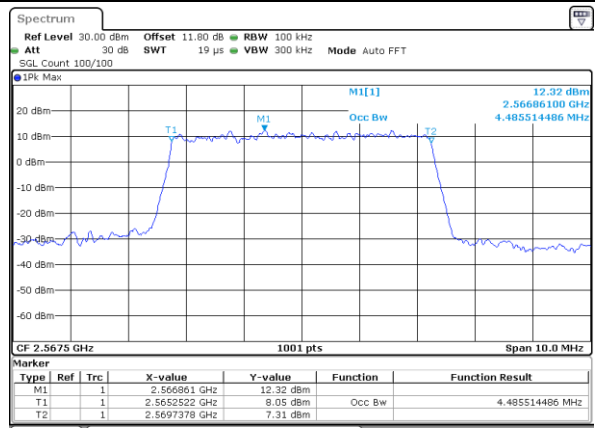
Date: 14.JAN.2020 17:42:02

Highest Channel / 5MHz / QPSK



Date: 14.JAN.2020 17:44:26

Highest Channel / 5MHz / 16QAM

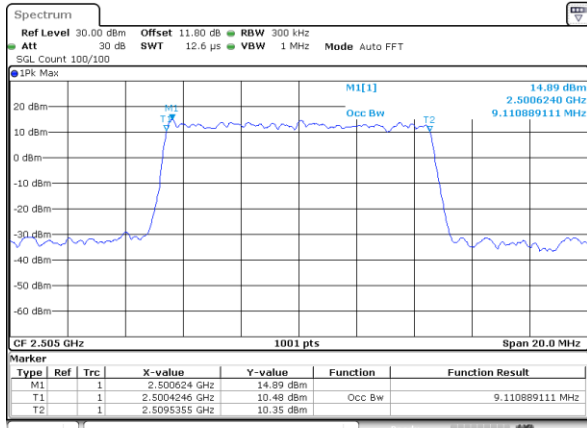


Date: 14.JAN.2020 17:44:40



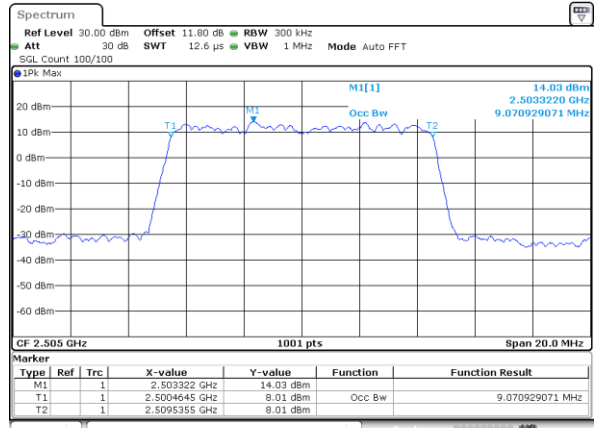
LTE Band 7

Lowest Channel / 10MHz / QPSK



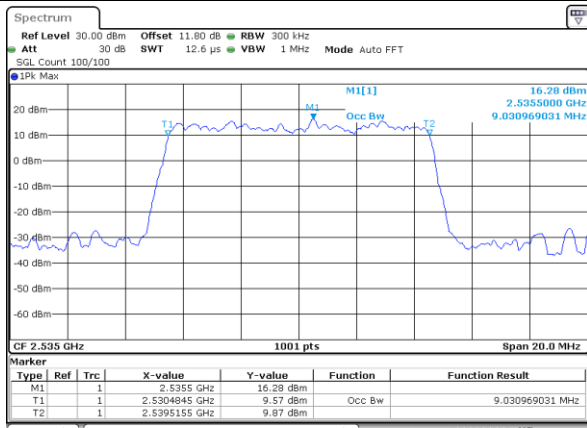
Date: 14\_JAN\_2020 17:59:18

Lowest Channel / 10MHz / 16QAM



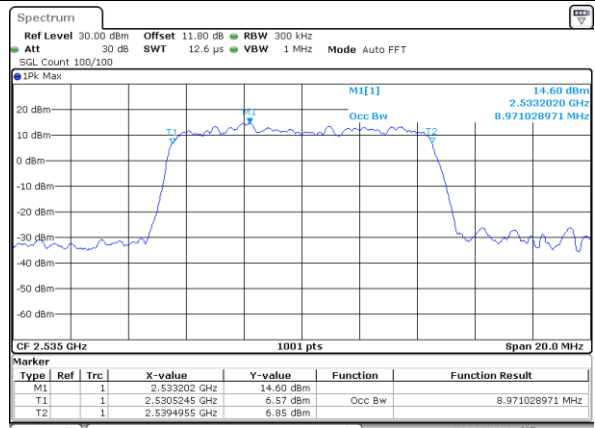
Date: 14\_JAN\_2020 17:59:31

Middle Channel / 10MHz / QPSK



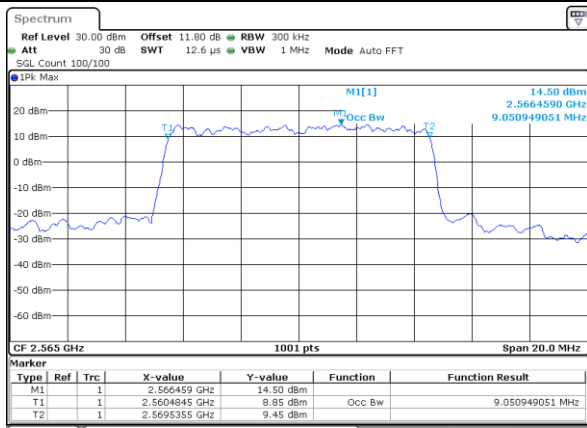
Date: 14\_JAN\_2020 18:06:04

Middle Channel / 10MHz / 16QAM



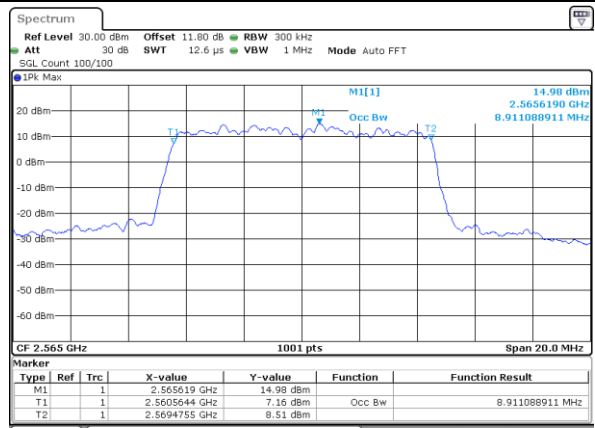
Date: 14\_JAN\_2020 18:06:17

Highest Channel / 10MHz / QPSK



Date: 14\_JAN\_2020 18:08:41

Highest Channel / 10MHz / 16QAM

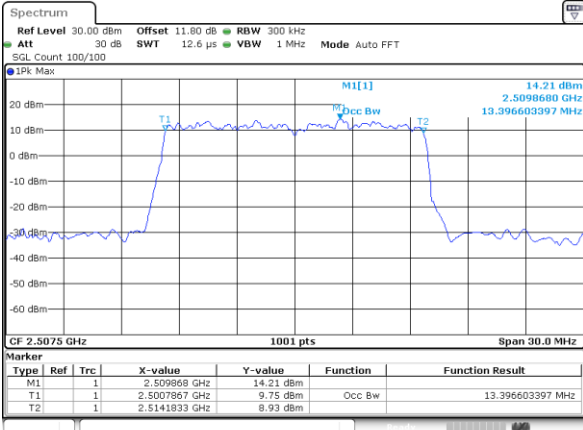


Date: 14\_JAN\_2020 18:08:55

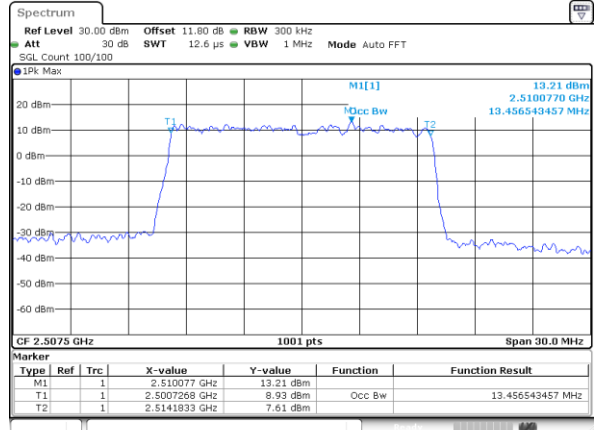


LTE Band 7

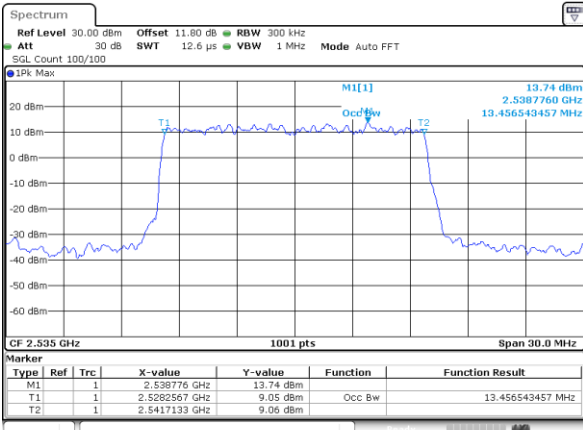
Lowest Channel / 15MHz / QPSK



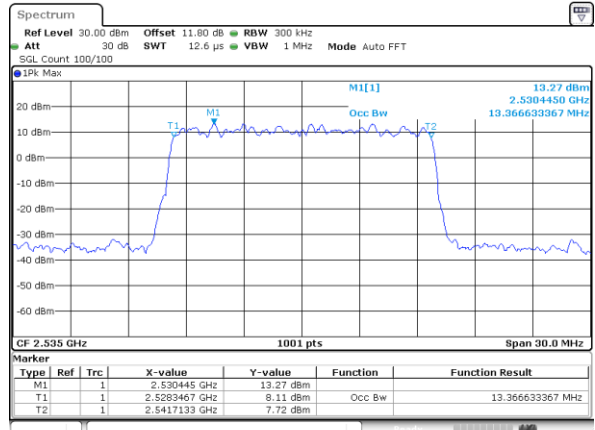
Lowest Channel / 15MHz / 16QAM



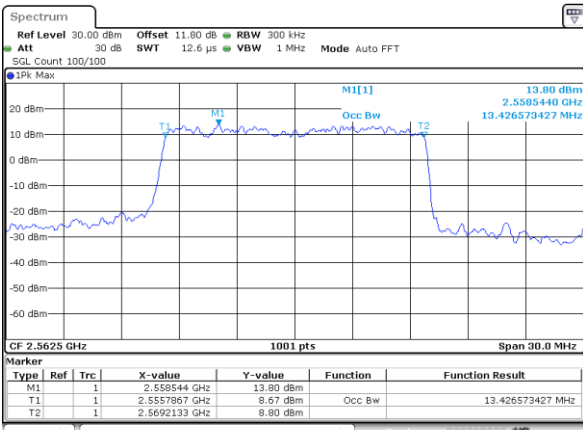
Middle Channel / 15MHz / QPSK



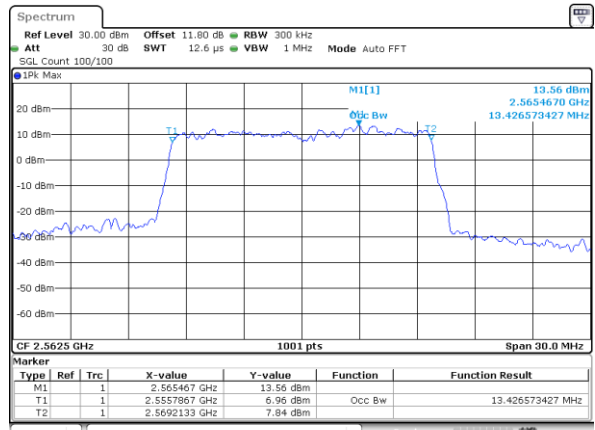
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK



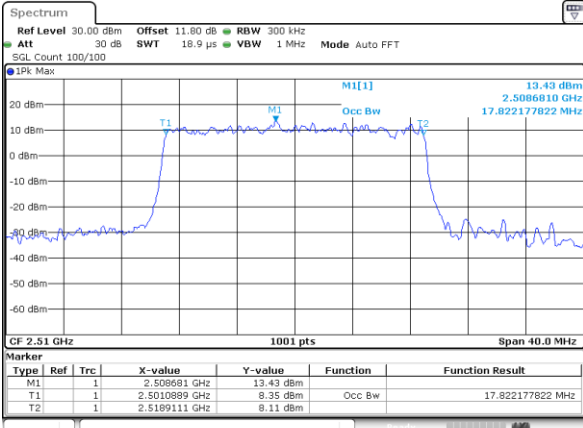
Highest Channel / 15MHz / 16QAM





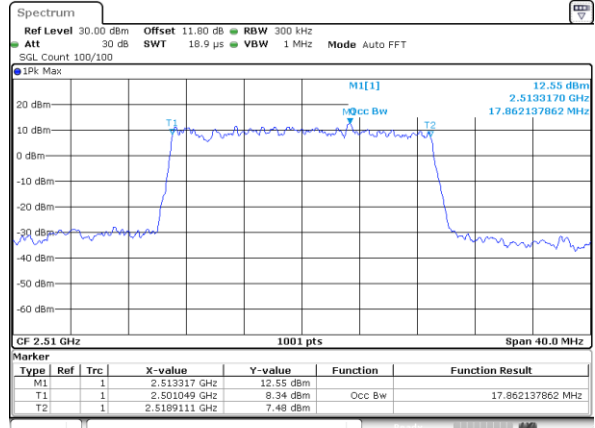
LTE Band 7

Lowest Channel / 20MHz / QPSK



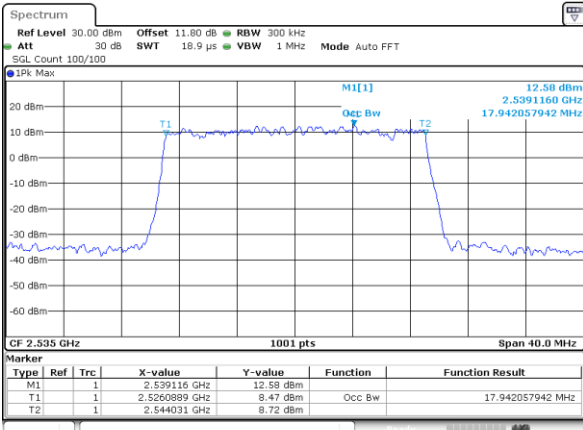
Date: 14.JAN.2020 19:19:17

Lowest Channel / 20MHz / 16QAM



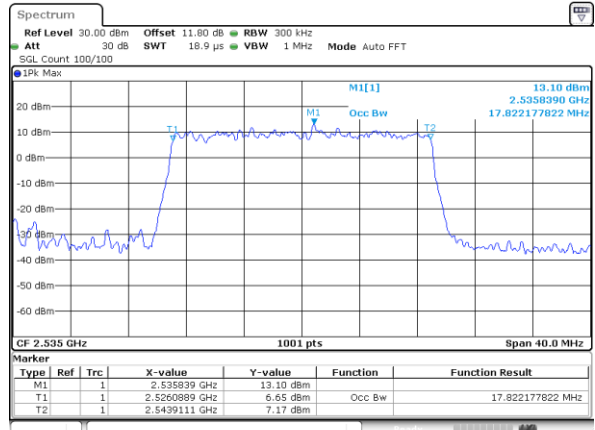
Date: 14.JAN.2020 19:19:33

Middle Channel / 20MHz / QPSK



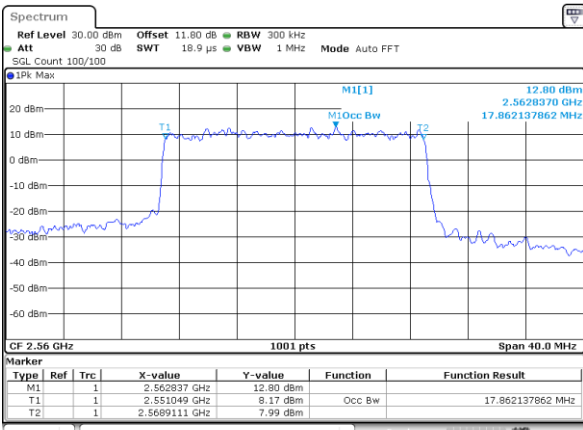
Date: 14.JAN.2020 19:26:07

Middle Channel / 20MHz / 16QAM



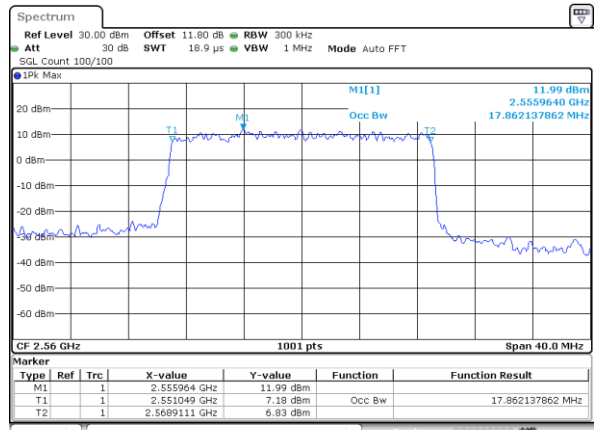
Date: 14.JAN.2020 19:26:20

Highest Channel / 20MHz / QPSK



Date: 14.JAN.2020 19:28:44

Highest Channel / 20MHz / 16QAM

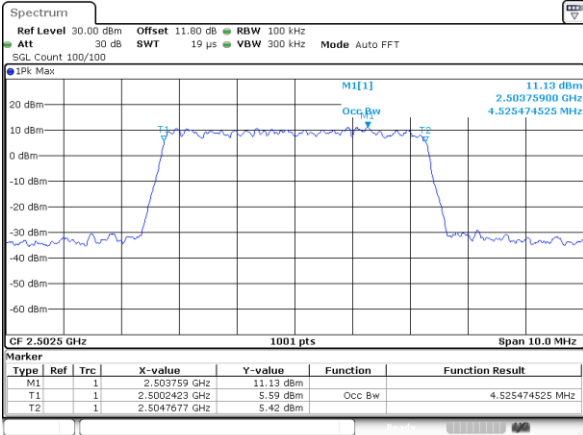


Date: 14.JAN.2020 19:28:57



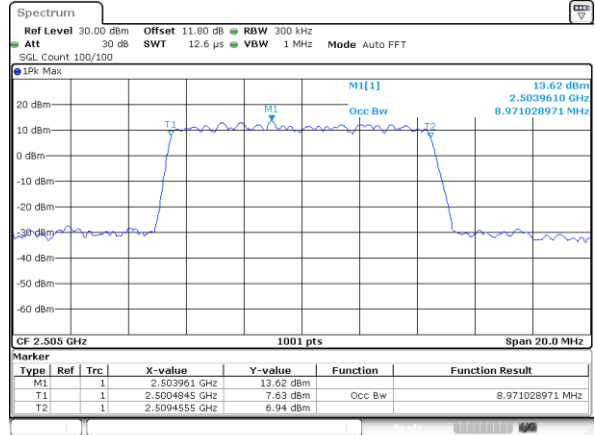
LTE Band 7

Lowest Channel / 5MHz / 64QAM



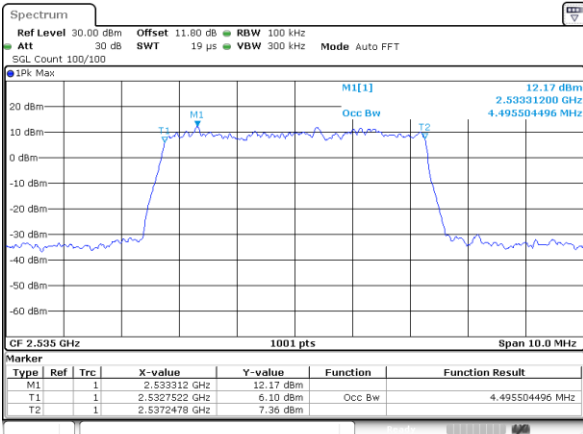
Date: 14.JAN.2020 17:51:13

Lowest Channel / 10MHz / 64QAM



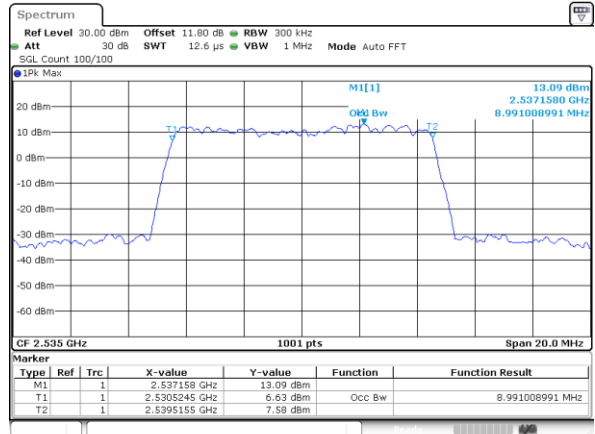
Date: 14.JAN.2020 18:15:27

Middle Channel / 5MHz / 64QAM



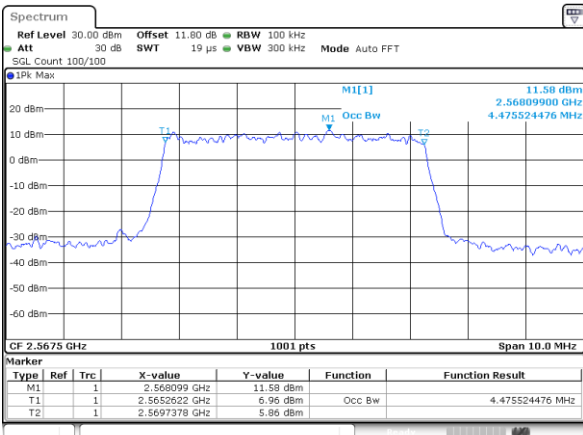
Date: 14.JAN.2020 17:54:36

Middle Channel / 10MHz / 64QAM



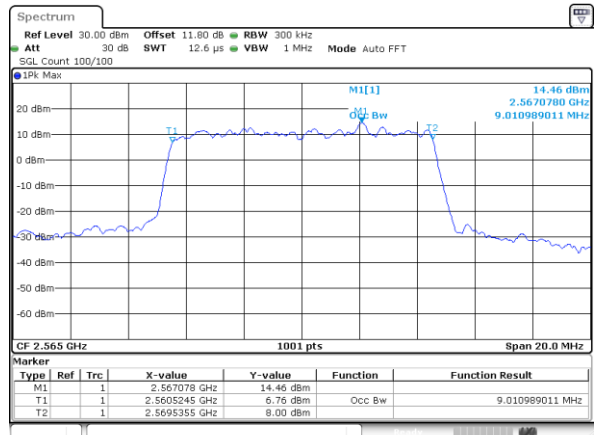
Date: 14.JAN.2020 18:37:36

Highest Channel / 5MHz / 64QAM



Date: 14.JAN.2020 17:55:54

Highest Channel / 10MHz / 64QAM



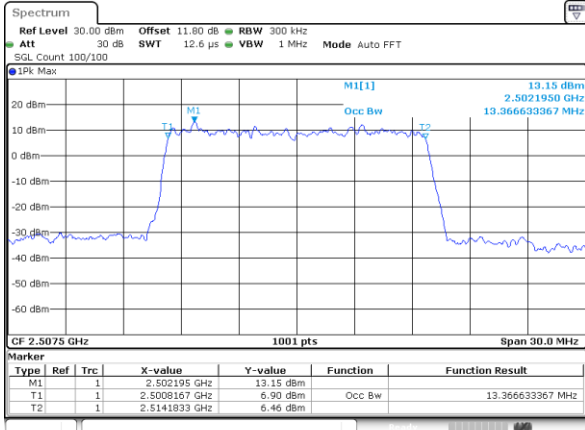
Date: 14.JAN.2020 18:38:55





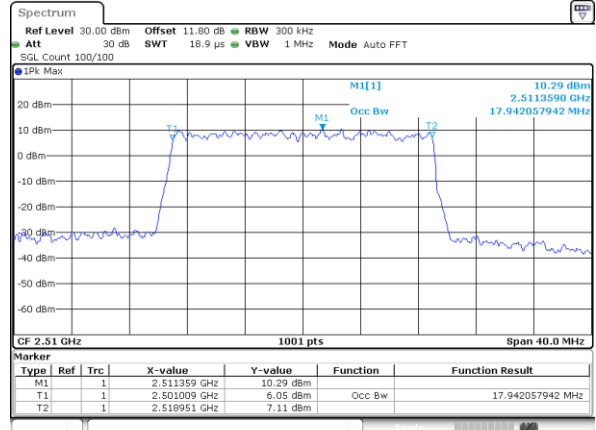
LTE Band 7

Lowest Channel / 15MHz / 64QAM



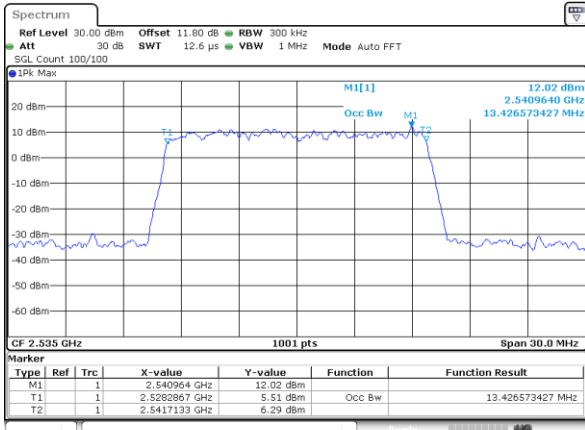
Date: 14, JAN, 2020 18:58:30

Lowest Channel / 20MHz / 64QAM



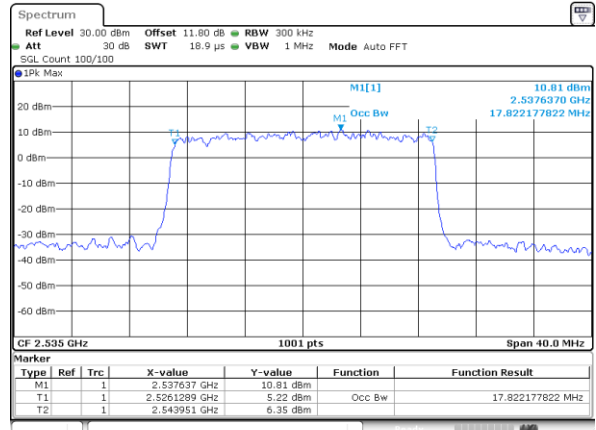
Date: 14, JAN, 2020 19:45:51

Middle Channel / 15MHz / 64QAM



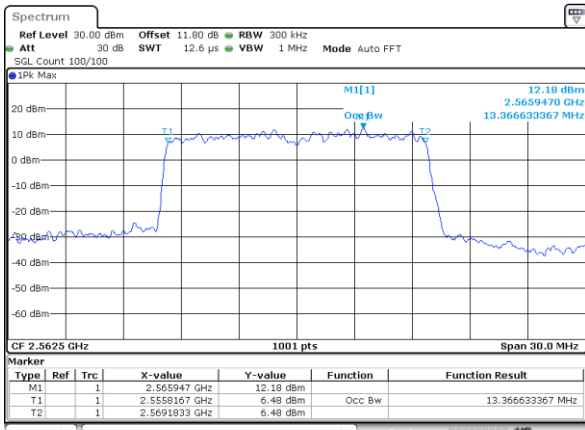
Date: 14, JAN, 2020 19:01:53

Middle Channel / 20MHz / 64QAM



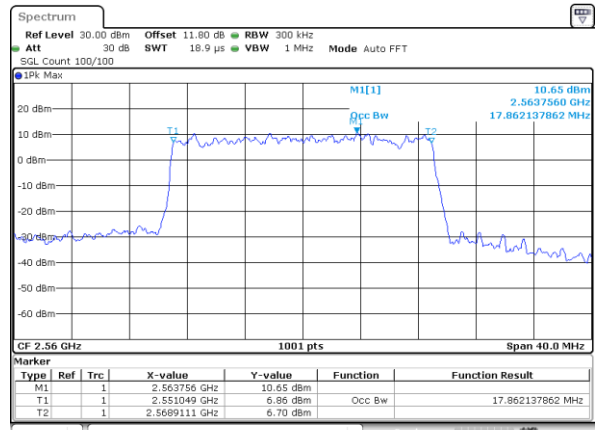
Date: 14, JAN, 2020 19:49:34

Highest Channel / 15MHz / 64QAM



Date: 14, JAN, 2020 19:15:54

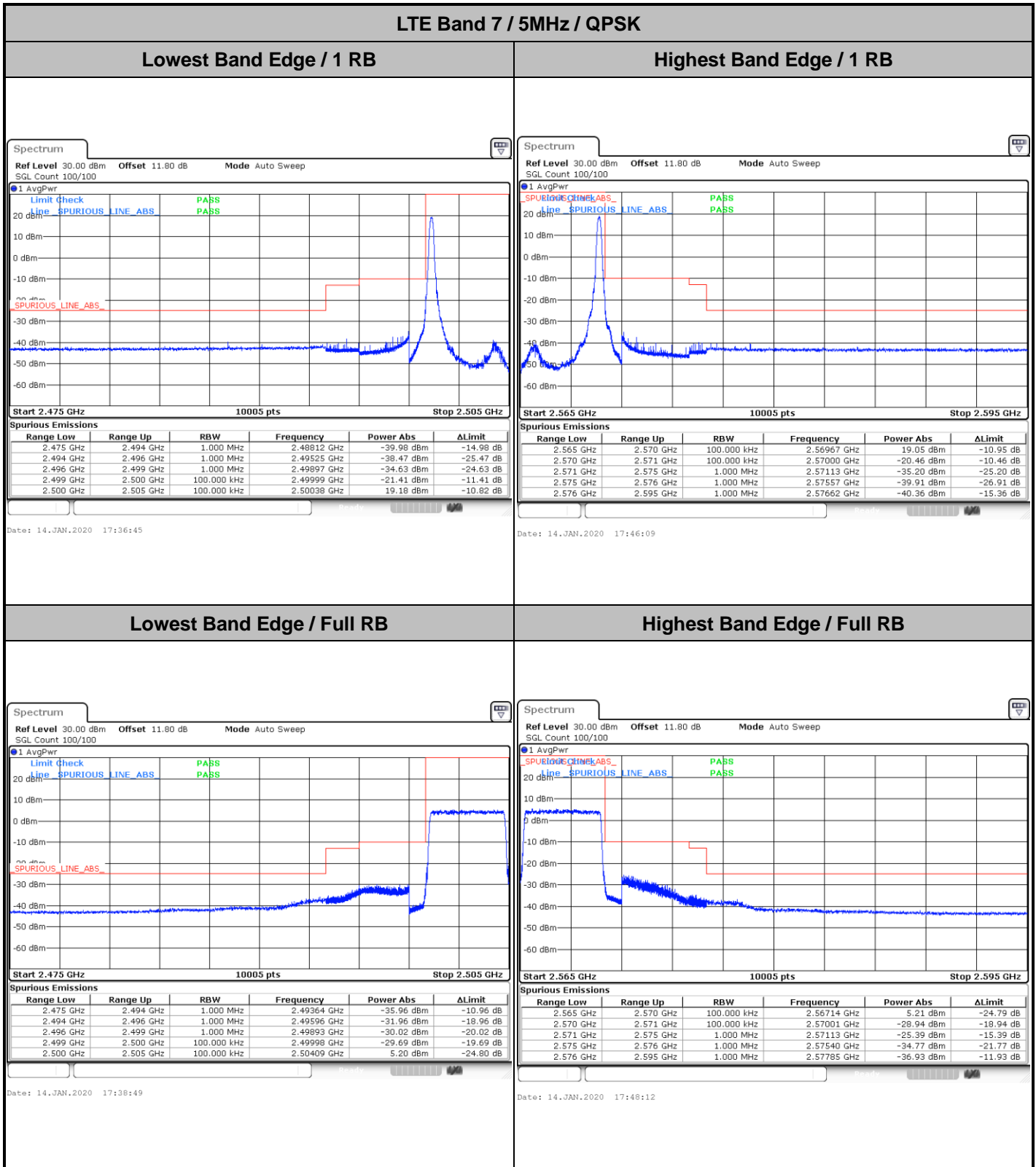
Highest Channel / 20MHz / 64QAM



Date: 14, JAN, 2020 19:50:52



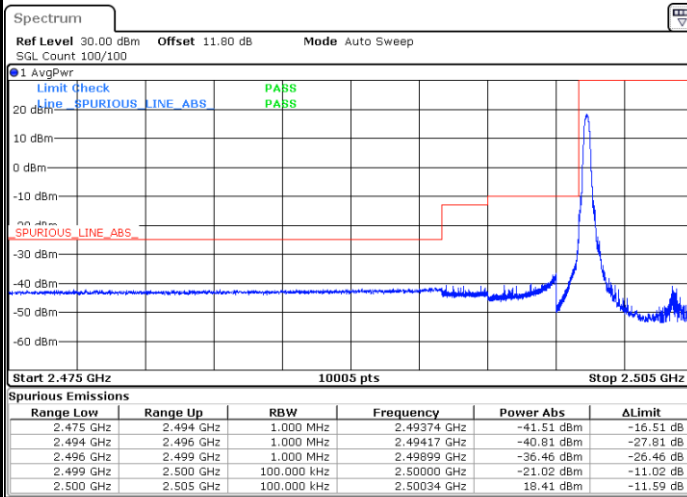
# Conducted Band Edge





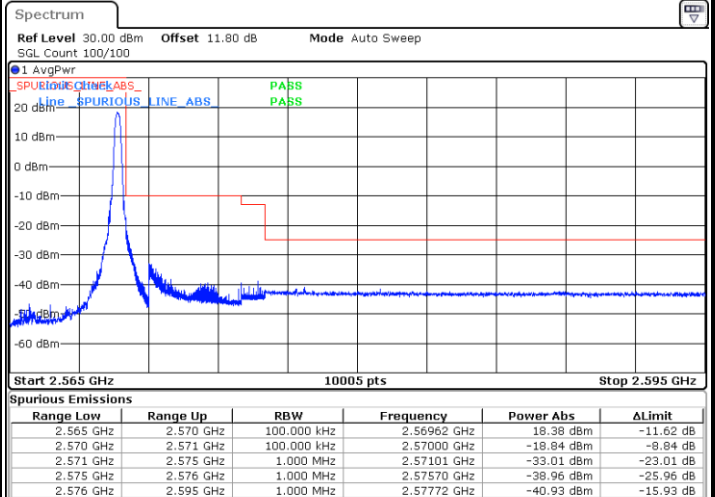
LTE Band 7 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



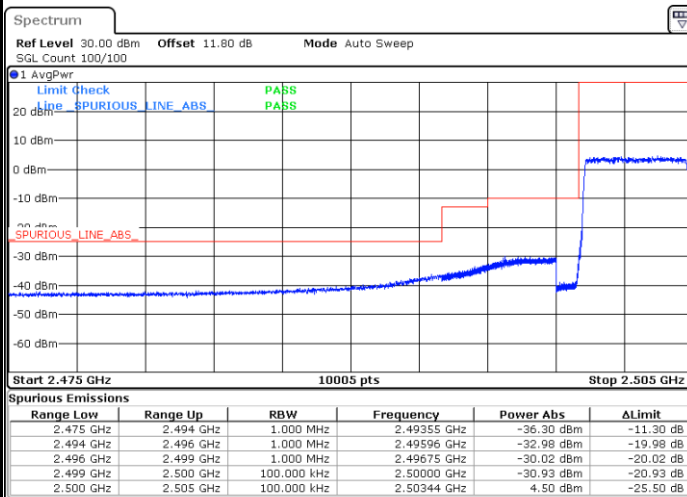
Date: 14.JAN.2020 17:37:47

Highest Band Edge / 1 RB



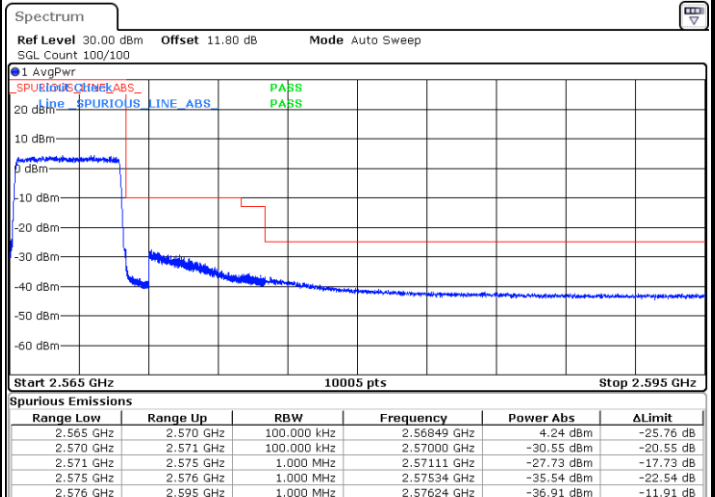
Date: 14.JAN.2020 17:47:11

Lowest Band Edge / Full RB



Date: 14.JAN.2020 17:39:50

Highest Band Edge / Full RB



Date: 14.JAN.2020 17:49:14